

Phthalates Action Plan

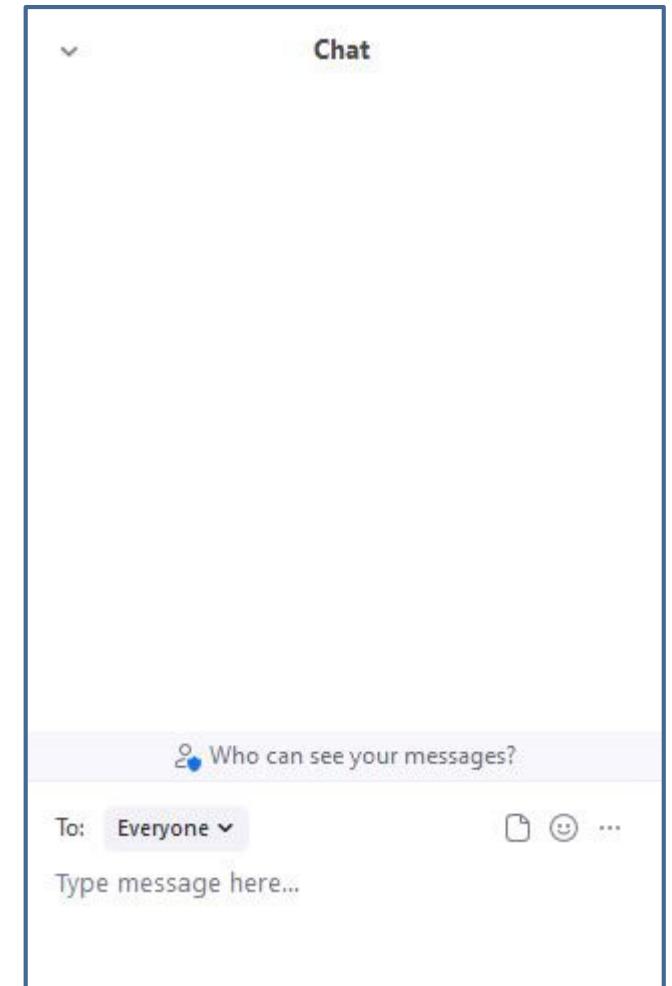
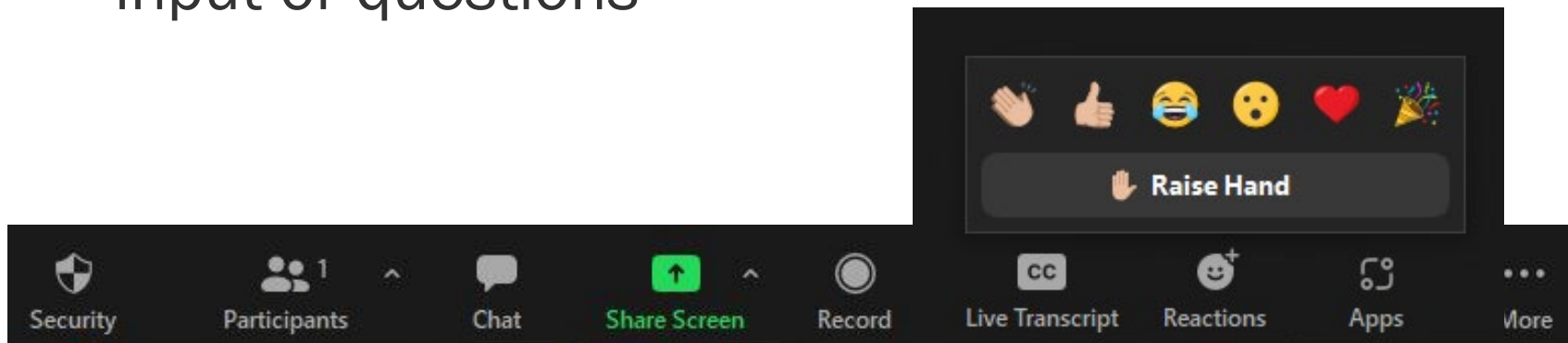
Advisory Committee Meeting – March 3, 2022

Phthalates in Products



Zoom meeting logistics

- Technical issues? Send to **host** in chat
- Questions/comments? Send to **everyone** in chat
- We will address along the way and during discussion
- During discussion, raise hand to share verbal input or questions



Today's agenda

- 1 9:00 AM: Agenda and introductions
- 2 9:10 AM: February 17 meeting recap
- 3 9:20 AM: Discussion—phthalates in products
- 9:50 AM: Break
- 4 10:00 AM: Discussion—phthalates in products (continued)
- 5 10:45 AM: Public input
- 6 10:55 AM: Closing and next meeting

Housekeeping

Project webpage: <https://bit.ly/phthalates-AP>

- Agenda
- Agenda attachments
- Meeting slides
- Input compilation

This project has been funded wholly or in part by the U.S. Environmental Protection Agency (EPA) under assistance agreement PC-01J18101 to the Washington Department of Ecology. The contents of this document do not necessarily reflect the views and policies of the EPA, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.



Part One: Introductions

Introductions

- Committee members
- Agency staff
 - Health
 - Ecology
 - Fish and Wildlife
 - Natural Resources

Participant updates

- Advisory committee
 - King County Hazardous Waste Management Program: Ashley Evans
 - Multicare Health System: Tony Garcia
 - Vizient: Cristina Indiveri
- Agency staff
 - Health: Emerson Christie



Part Two: Feb. 17, 2022 Meeting Recap

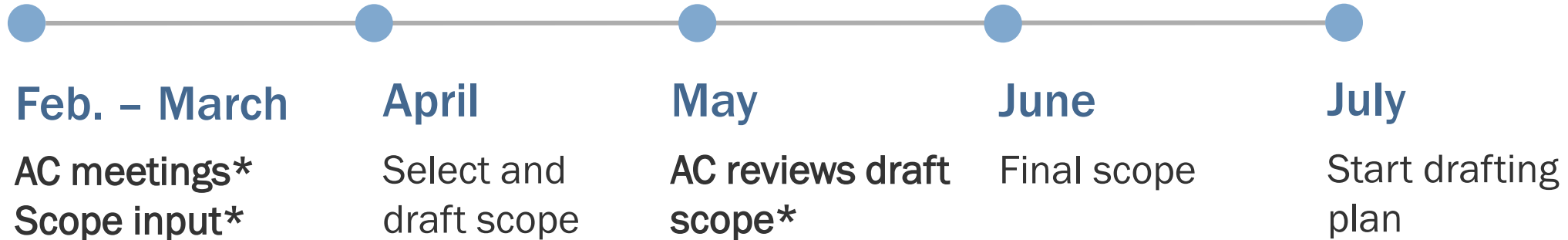
Our focus

- Working toward recommendations that will reduce:
 - Human exposure to phthalates
 - Environmental contamination
- Statewide, big picture view
- Paying attention to:
 - Sensitive species and habitats
 - Sensitive or overburdened populations



Action plan scoping

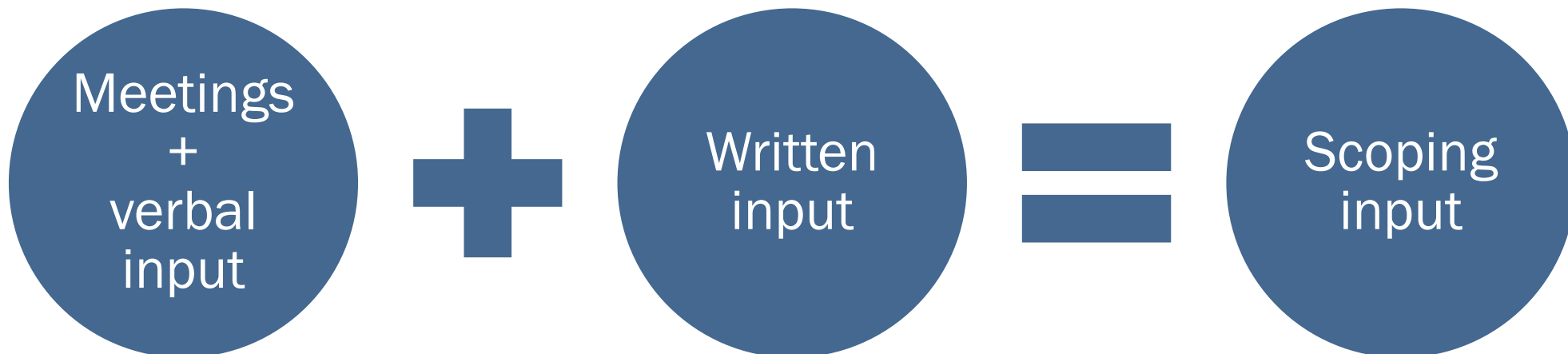
● Scoping
1st Half 2022



*Advisory committee participation

How to provide input

- Participation in advisory committee meetings
 - Verbal input and discussion
- Submit input in writing between meetings
 - Online comment form (on project webpage)
<https://hwtr.ecology.commentinput.com/?id=haD3V>
 - Deadline for written input: **April 15, 2022**



Meetings by topic area

- Focus meeting input on scheduled topics
- Stay flexible to overlap
- Written input on **any** topic
- Parking lot: Your suggestions welcome



February 17 key areas of input

- No phthalate production in Washington
- Look closely for plastics manufacturing sources
- Track California Department of Toxic Substances Control (DTSC), other jurisdictions working on phthalates
- Recommended resources
- Value of third-party assessments and certifications
- Consider input on a variety of product types

- Suggestion for conflict of interest statements

Productive, fair meetings

- Open minds
- Collaboration and not confrontation
- Recognize that people are not always going to agree
- Everyone has a chance to be heard
- Respect each others' opinions
- Keep on task
- Direct and straightforward communication
- Transparency





Recap Questions?



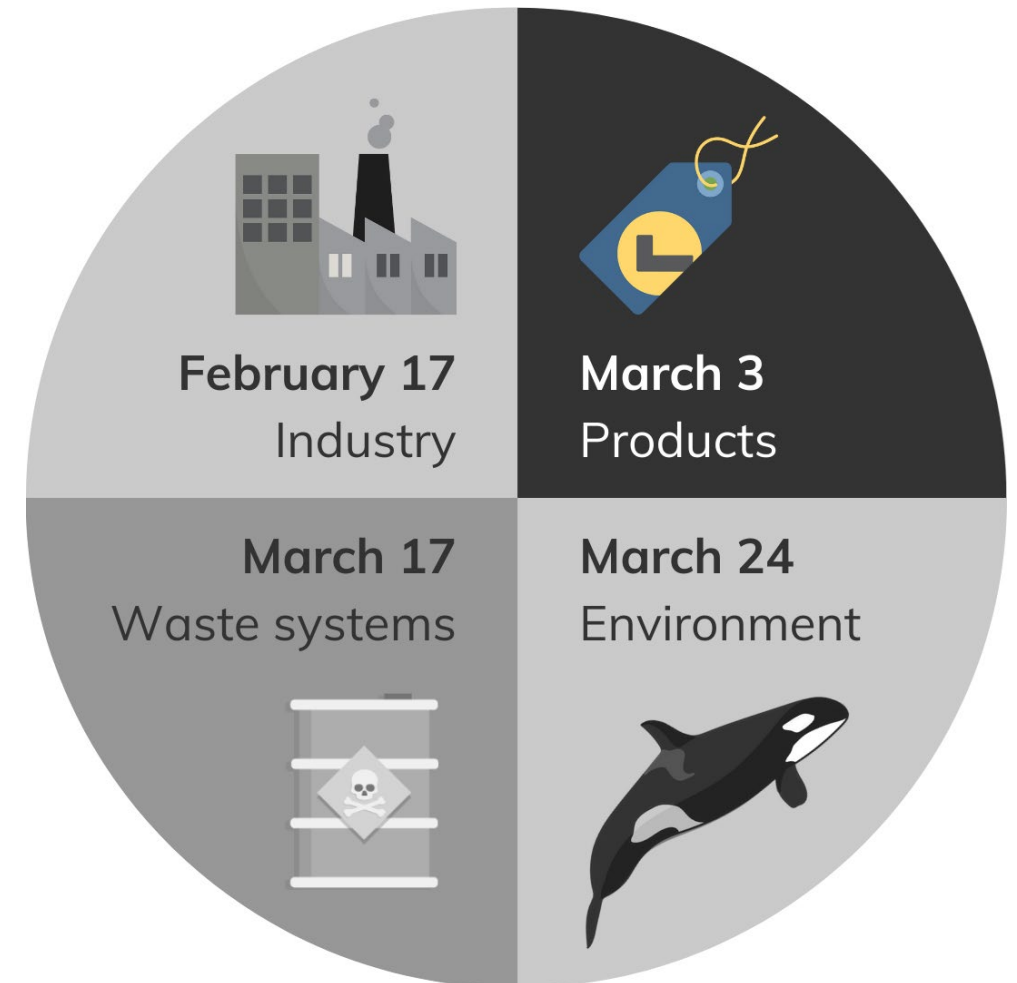


Part Three: Discussion

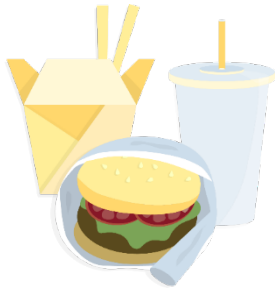
Phthalates in Products

Today's topic area: Phthalates in products

- Prioritize and discuss products to focus on in the action plan
- Identify incentives and paths to reduce phthalates in products
- Identify highly exposed or sensitive populations
- Recommendations for action



Example product categories



Food processing equipment



Medical devices



Exterior use and building materials*



Consumer products*

*Our Safer Products for Washington program is addressing vinyl flooring and fragrances in personal care products.

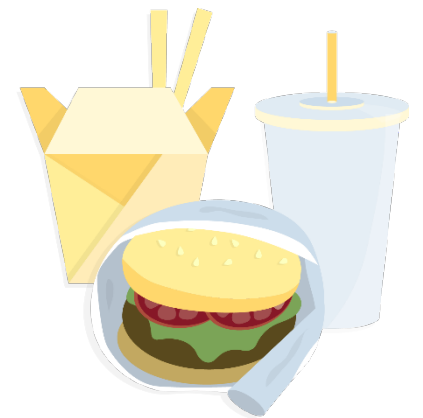
Which product categories contribute to potential human exposure and environmental contamination?

Questions to consider about use and exposure

- What information on exposure from products can you share?
- What alternatives to phthalates are already available?
- What incentives and disincentives effect change?
- What other actions could be proposed to reduce people's exposure (such as educational materials, or how products are used)?

Product category: Food processing equipment

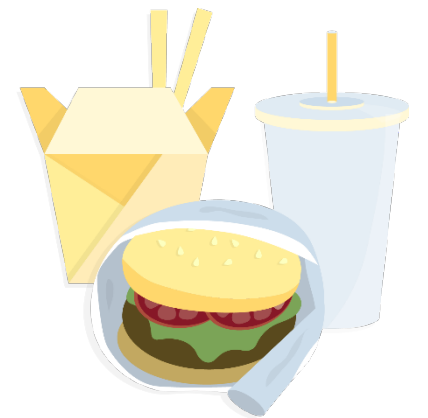
- Food identified as the major route of phthalate exposure for most people^{1, 3}
- Wide range of food categories associated with phthalate exposure²
- Unintentional food additives likely introduced at several points:⁴
 - Production
 - **Processing**
 - Packaging
 - Food service



Food processing equipment—Discussion questions

- Are there food production processes or equipment that present opportunities to reduce phthalate contamination of food?
- What are the challenges to reducing unintentional phthalates in foods? What recommendations could the action plan make to facilitate progress?
- Are there dietary sources of phthalates that disproportionately affect sensitive populations? What recommendations could we make to reduce disproportionate impacts of exposure?

If you can refer us to experts in this topic area, please reach out.



Scope input—food processing equipment

- The 2018 FDA report shows a good picture of use and materials.
- Some changes may have occurred since that report. Beverage cap linings may be switching to alternatives.
- Dairy tubing was identified [as a source of phthalates in food process equipment] at a 2018 European Dairy Farmers (EDF) meeting. Many are switching, but this might be a good specific area to look at.
- Be cautious about reports showing low levels of phthalates in the ppb range. There is potential for analytic artifacts (e.g., dibutyl phthalate [DBP] from a pipet tip).
- Recent article on di(2- ethylhexyl) phthalate (DEHP) in beer cap liners. The study only measured DEHP in liners, not in the beer itself. Phthalates are quite insoluble in water, so this may limit the potential for contamination in some applications.
- An intervention study looking at phthalate exposures from food saw significant contamination in high-fat dairy products and spices.
- Plastic is not used to produce spices and cannot explain contamination, source is unknown.

Scope input—food processing equipment

- Flexible tubing that has not been flushed could be a large source of contamination in high-fat dairy. We need to know the chemical makeup of tubing. Food itself could be already contaminated from sources such as animal feed. This is another area to look at.
- Other studies have highlighted fast food and highly processed foods, likely exposed to phthalates from packaging.
- Broad category of phthalates, but also alternatives, that may have toxicity issues. DEHP has decreased over time, but alternative phthalates such as di-isononyl phthalates (DINP) have increased.
- Contact food processing companies.
- Phthalates are lipophilic and typically not permitted to be used in contact with fatty foods. Mostly used in aqueous-based foods. Not allowed in certain types of food contact materials by law.
- If livestock feed is contaminated, phthalates may bioaccumulate in animals.
- In food processing, conveyer belts can have large percentages of phthalates (31% DEHP).
- Dairy tubing can still contain high levels of DEHP.

Scope input—food processing equipment

- We need to look at inflations, where certain specific phthalates may be used.
- For the dairy industry, tried to look at sources and also noticed vinyl mats on the floor and vinyl gloves worn by workers. So other sources may not be directly involved, but contaminate due to off-gassing in the facilities.
- Inks and dyes in packaging could also be a source.
- Phthalates in pesticides and nonorganic meat.
- Plastic containers used for dairy, such as milk.
- Input that phthalates do not bioaccumulate and are not typically used in milk containers, which are mostly polypropylene.
- Dairy inflations refer to teat cup liners in mechanical milking systems. The side opposite the vacuum of inflation is the first food contact surface encountered by warm milk fresh from cows.

Scope input—food processing equipment

- Might consider looking at air quality in Eastern Washington because smog present is likely resulting from agricultural spraying (pesticides). Consider this as a potential source. This may be particularly important for Tribes in this area.
- A potential source is burning polyvinyl chloride (PVC) in waste facilities (e.g., in Spokane)?
- Another consideration is that cows also eat dirt with grass, in addition to feed.
- A potential source is food processing water where PVC plumbing is used.
- Rigid PVC pipes do not contain intentionally used phthalates. Cross-linked polyethylene (PEX) pipes in homes?
- 95% used in flexible PVC.
- What is the allowable percentage of phthalates in can and glass liners?

Break

- Stretch and get a refill!
- See you in 10 minutes



Product category: Medical devices

- DEHP is used in medical applications such as IV fluid bags and tubing, indwelling devices, respiratory support equipment, and more.⁵
- Some studies show that ICU and NICU patients have high exposures to phthalates as a result of their care.⁶
- In 2001, FDA recommended reduction in exposure to DEHP from medical devices.⁷
- Many hospitals have worked to implement the recommendations.



Medical devices—discussion questions

- What health care services still have the potential to contribute to higher patient phthalate exposures?
- What information could help medical device users transition to alternatives, and what are the challenges? What is the current level of transparency in the supply chain?
- Where phthalates persist in medical applications, what actions could reduce exposures, and who would be the key partners for us?



Scope input—medical devices

- Since FDA has its own process, what actions could be taken at the state level?
- Lots of progress made in this area at major hospitals, especially regarding tubing.
- The newborn intensive care unit (NICU) is one of the areas of highest exposure potential.
- Respiratory tubing does not have a lot of alternatives. Health Care Without Harm has resources to address identifying alternatives.
- In this setting, some uses do not have suitable alternatives.
- Providing smaller, regional hospitals with information that already exists could be a helpful initiative. Two main areas—division of environmental management and supply chain managers.
- Still used in many types of respiratory and feeding tubing as well as IV bags, etc. There has been great progress, but there are still major exposures and a long way to go.

Scope input—medical devices

- Vizient highlights products and their attributes. One is specific to phthalates and lists DEHP. Does a lot of work with members and suppliers. The price has been inflated, but recently this is becoming less of a barrier. Knowledge of this issue is increasing in larger health care organizations as well. Mid-small size hospitals might not have resources to address currently. Labeling is lacking. This could be an area to look at.
- There are alternatives [to phthalates] in vinyl gloves in medical and food service.
- What can the state do around transparency? Get information from manufacturers themselves. Does federal regulation prevent addressing uses in these products at the state level?
- FDA preemption should be looked at closely for this area. Chemicals of concern may not be regulated in these products.
- Medical devices do go through an approval process by the FDA. Governs what medical products can be used. Look into this area.

Scope input—medical devices

- Chemical action plans are regulatory and nonregulatory recommendations but do not create new regulations.
- Kaiser was the first to commit to phasing out PVC in Washington. Used purchasing power to drive change.
- This issue may have fallen off the radar, so educational materials in collaboration with someone such as Kaiser may be helpful.
- Kaiser's requirements have been imbedded into Vizient's requirements to suppliers. Phase out process for promoting change. Also asking other suppliers to adopt attributes, because with a common set of guidelines expedited change is more likely. Show member commitment with dollars to demonstrate shift.
- Could Ecology adopt similar attributes in recommendations?

Scope input—medical devices

- The state could help with messaging around medical device suppliers for home care and assisted living care.
- Environmental teams at hospitals are not focused on this. Sustainability side is a better area to focus to create standards, policies, goals for purchasing, and end-of-life considerations. Consider how these materials can be recycled before adopting any new policies.

Product category: Building materials

- Phthalates are used in many building and exterior use materials^{13,14} (roofing, adhesives, sealants, wire or cable housings, pipes, etc.).
- Voluntary standards and resources for building projects include phthalates on their restricted or substances of concern lists.^{15,16}
- Studies suggest phthalates in building materials can contribute to both human exposure and environmental contamination.^{17,18}



Building materials—discussion questions

- What building and exterior use materials should we focus on?
- Are there construction or industry organizations that we should connect with that can influence building material choices?
- What recommendations could be made in this area (such as product testing or public procurement policies)?



Scope input—building materials

- Places that the Healthy Building Network (HBN) sees phthalates most used— many categories listed on the past slide. Have not seen evidence in pipes (rigid PVC). Deprioritize pipes, and consider holding tanks and storage tanks.
- Intentional uses include roofing and waterproofing materials and low slope, flat roofs. PVC roofing contains significant amounts of phthalates. Also adhesives used in roofing materials. On interiors, sealants—such as poly(silyl ether)—industry is moving away from phthalates in this area, but the phaseout is not complete.
- Metal coating systems, including exterior metal systems such as polyvinylidene fluoride (PVDF) coatings, can contain phthalates. Also interior metal coatings, for example, coated wire shelving. Vinyl wall base—may be phased out in wall base, but not clear.
- Connect with green building rating systems. Enterprise Green Communities for affordable housing calls out phthalates in adhesives, sealants, and flooring. The Evergreen Sustainable Development Standard adopted Enterprise Green Communities' criteria for optional points. This could be an area for progress.

Scope input—building materials

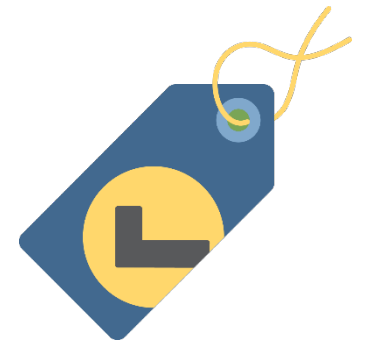
- American Institute of Architects, for education.
- Purchasing platforms such as Material Bank could be another opportunity for education.
- Education should include considering different material types that do not require plasticizers, for example, thermoplastic polyolefin (TPO), instead of PVC roofing.
- PEX does not require phthalates, but other comments do suggest we should continue to look into this area.
- Zero Waste Washington (ZWW) tested materials like specialty tapes, brake pads, and crosswalk materials. Did not find phthalates in paint. Also, ZWW would like suggestions on other materials they should test.
- An important agency to work with on this is Department of Commerce. Commerce needs help, on a technical level, from Ecology and Health to understand that Evergreen Standards apply to affordable housing. Good area to improve education on toxics. There could be large purchasing impacts.
- Building materials should be the focus of Ecology under Safer Products for Washington.

Scope input—building materials

- Department of Commerce also runs weatherization programs using adhesives and sealants.
- Internal and external building materials should both be looked at, and recommendations should be framed to tease out environmental and human health impacts. Irina mentions the action plan is taking a big picture view to determine what areas we can act in, to reduce both of these types of exposures.
- Are phthalates produced as a by-product of any production processes? A comment that this is unlikely, due to the synthetic process for phthalates.

Product category: Consumer products

- Phthalates are used as plasticizers in flexible plastic products (such as vinyl textiles and furniture, exercise equipment, automotive interiors).^{8, 9, 10}
- Phthalates are also sometimes a component of fragrance in products (such as cleaners, air fresheners, candles).^{11, 12}



Consumer products—discussion questions

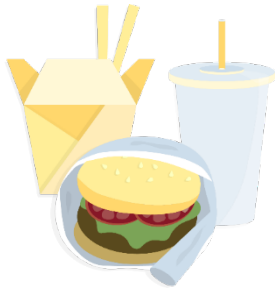
- What consumer products should recommendations focus on?
- What information can you share about potential disproportionate exposure in sensitive or overburdened populations from products?
- What types of initiatives could best reduce exposures from products (such as educational materials, alternatives assessments, or partnerships)?



Scope input—consumer products

- We did not have enough time to discuss consumer products during the March 3, 2022 meeting.

Example product categories



Food
processing
equipment



Medical
devices



Exterior use
and building
materials*



Consumer
products*

*Our Safer Products for Washington program is addressing vinyl flooring and fragrances in personal care products.

Which product categories contribute to potential human exposure and environmental contamination?

Scope input—other important product categories

- We did not have enough time to discuss other product categories during the March 3, 2022 meeting.



Part Four: Public Input and Questions

Scope input

- We did not have enough time for dedicated public input during the March 3, 2022 meeting and instead opened the floor to all attendees sooner in the discussion.



Part Five: Closing

Next meeting March 17, 2022

Next meeting

March 17: Waste systems

- Agenda and packet shared prior to meeting
- Submit written input via comment form
- Check project webpage for documents
- Contact us if you have questions
 - ChemActionPlans@ecy.wa.gov
 - Irina's cell: 360-584-3456



Project links

- EZ view project webpage: <https://bit.ly/phthalates-AP>
- Online comment form:
<https://hwtr.ecology.commentinput.com/?id=haD3V>
- Washington Administrative Code 137-333-340:
<https://app.leg.wa.gov/WAC/default.aspx?cite=173-333-340>
- Puget Sound Partnership Near Term Action 2018-0465
Chemical Action Plans for Endocrine Disrupting Chemicals (EDCs):
<https://actionagenda.pugetsoundinfo.wa.gov/Project/Detail/13091>

Footnote links

1. <https://www.cpsc.gov/s3fs-public/CHAP-REPORT-With-Appendices.pdf>
2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7460375/>
3. <https://doi.org/10.1016/j.envint.2018.02.029>
4. <https://doi.org/10.1080/19440049.2018.1447695>
5. <https://www.fda.gov/media/114001/download>
6. <https://doi.org/10.3390/toxics9050090>
7. <https://wayback.archive-it.org/7993/20170111182403/http://www.fda.gov/MedicalDevices/Safety/AlertsandNotices/PublicHealthNotifications/ucm062182.htm>
8. https://www.askreach.eu/wp-content/uploads/2021/01/AskREACH_sports-articles-test_-_Backgroundreport_Engl_FINAL-Logo.pdf
9. <https://www.americanchemistry.com/content/download/5872/file/High-Phthalates-Make-Many-Products-You-Use-Every-Day-Possible.pdf>
10. <https://www.americanchemistry.com/content/download/5458/file/Phthalates-Used-In-Automotive-Manufacturing.pdf>
11. <https://doi.org/10.1016/j.buildenv.2016.11.009>
12. <https://www.ecocenter.org/healthy-stuff/reports/maine-phthalate-data-2016-report>
13. <https://www.americanchemistry.com/industry-groups/high-phthalates/resources/phthalates-building-construction>
14. https://zerowastewashington.org/wp-content/uploads/2019/04/Phthalates-Project_product-report-Final.pdf
15. <https://living-future.org/lbc/>
16. <https://homefree.healthybuilding.net/products>
17. <https://doi.org/10.1016/j.envint.2017.07.007>
18. <https://semspub.epa.gov/work/10/100002163.pdf>