

## Overview

The Washington Departments of Ecology and Health are collaborating to complete an action plan focused on reducing sources, uses, and releases of phthalates. This document compiles the input we’ve received throughout the process of developing the action plan.

We received this input from members of the advisory committee as well as other stakeholders and the public. This document includes input we received via all methods, including during meetings and webinars, through our [online comment form](#),<sup>1</sup> and via email or other direct communication. This document will be regularly updated as we develop the action plan.

Please find more information on the [Phthalates Action Plan project webpage](#)<sup>2</sup> or [contact the action plan team](#)<sup>3</sup> if you have questions about the project.<sup>4</sup>

## Acronyms

**Table 1. Acronyms found in this document and definitions.**

Acronym	Definition
AP	Action Plan
BPA	Bisphenol A
C8, 10, 11, 13	Eight, ten eleven, or thirteen carbon chain
CAP	Chemical Action Plan
CBI	Confidential business information
CDC	Centers for Disease Control and Prevention
CEC	Chemical of emerging concern
CPA	Clean Production Action
CSPA	Children’s Safe Products Act
DBP	Dibutyl phthalate
DEHP	Di(2- ethylhexyl) phthalate
DIDP	Di-isodecyl phthalate
DINP	Diisononyl phthalate
EDC	Endocrine disrupting chemical
EDF	Environmental Defense Fund
EPA	Environmental Protection Agency
FCM	Food contact material
FDA	U.S. Food and Drug Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
GPO	Group purchasing organization

<sup>1</sup> <https://hwtr.ecology.commentinput.com/?id=haD3V>

<sup>2</sup> <https://bit.ly/phthalates-AP>

<sup>3</sup> [ChemActionPlans@ecy.wa.gov](mailto:ChemActionPlans@ecy.wa.gov)

<sup>4</sup> 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.

Acronym	Definition
HBN	Healthy Building Network
IADN	Integrated Atmospheric Deposition Network
mg/L	Milligrams per liter
MSW	Municipal Solid Waste
NHANES	National Health and Nutrition Examination Survey
NIOSH	National Institute for Occupational Safety and Health
NOAA	National Oceanic and Atmospheric Administration
NRDC	Natural Resources Defense Council
OECD	Organisation for Economic Co-operation and Development
OEM	Original equipment manufacturer
PCB	Polychlorinated biphenyl
PE	Polyethylene
PEX	Cross-linked polyethylene
PFAS	Per- and polyfluoroalkyl substances
ppb	Parts per billion
PPE	Personal protective equipment
PPM	Parts per million
PVC	Polyvinyl chloride
PVDF	Polyvinylidene fluoride
QA	Quality Assurance
TFF	Toxic Free Future
TPO	Thermoplastic polyolefin
TRI	Toxics Release Inventory
TSCA	Toxic Substances Control Act
WA	Washington
WDFW	Washington Department of Fish and Wildlife
WWTP	Wastewater treatment plant
ZWW	Zero Waste Washington

## Compiled input on the Phthalates Action Plan

**Table 2. Input received during the Phthalates Action Plan process, including the individual who provided the input, the date, the method used, and the input topic and subtopic, if applicable.**

Please note Ecology and Health did not edit this input for accuracy, we provided it as we received it. If input you provided is not correctly captured here, please [contact the action plan team](#).<sup>5</sup>

Name	Date	Method	Topic (subtopic)	Input
Valeriano	Feb. 17, 2022	Verbal	Process	Has Ecology considered conflict of interest in regards to transparency?
Dunn	Feb. 17, 2022	Verbal	General information	California EPA has already conducted phthalate assessments. Has the project team contacted them?

<sup>5</sup> ChemActionPlans@ecy.wa.gov

Name	Date	Method	Topic (subtopic)	Input
Harmon	Feb. 17, 2022	Verbal	Industry / manufacturing	<p>No one manufactures phthalates in Washington. Phthalates are produced largely in closed systems; the waste is treated in on-site wastewater treatment plants. Occupational exposure may occur during sampling. Closed systems reduce exposure. PPE and laboratory fume hoods are also employed to reduce exposure. Tank emissions are also controlled on-site using thermal oxidizers.</p> <p>There are no representatives from down-stream manufacturers on the committee (plastic compounding, phthalate processing). They could provide helpful information about their processes and exposures. The phthalates' manufacturing industry has engaged with their clients regarding EPA's pre-manufacturing notices. Pat will talk with a few counterparts to see if there is anyone he can recommend for the committee.</p> <p>The public OECD report put together for plastics processing industries may be helpful - it talks about open versus closed processing practices and gives estimates for emissions throughout the production lifecycle. It also identifies foreign manufacturers and stakeholders.</p>
Adenuga	Feb. 17, 2022	Verbal	Industry / manufacturing	<p>Also, not aware of any phthalate production sites in Washington.</p> <p>Facilities are generally closed systems; all environmental waste goes to WWTPs; other processes get rid of diesters and mono esters before WWTP; manufacturing processes are closed systems.</p> <p>The 2021 IHS Markit© report is also a good reference for manufacturing and identifies those phthalates which are not being manufactured in the U.S. anymore. Agrees that the OECD report is a good resource.</p>
Dunn	Feb. 17, 2022	Verbal	Industry / manufacturing	<p>Is the project looking at neighboring states which may have potential phthalate production sites, such as Idaho and Oregon? Pat and David are not aware of any sites in these states.</p>
Schreder	Feb. 17, 2022	Verbal	Industry / manufacturing	<p>There could also be manufacturing sites in British Columbia?</p>

Name	Date	Method	Topic (subtopic)	Input
Harmon	Feb. 17, 2022	Verbal	Industry / manufacturing (chemical production)	<p>The primary use of phthalates, greater than 90% is in the plastics industry as plasticizers. There is less information available on other uses, and some of it can be found in patent applications. BASF is not engaged with producers of cosmetics and personal care products.</p> <p>The IHS Markit© report provides a good overview and includes estimates of past years and forecasting information.</p> <p>Other sources of information include NHANES data looking at human biomonitoring trends and NIOSH publications looking at occupational exposures (plastics processing, phthalate manufacturing, and nail salons). However, some of this data may be dated.</p>
Valeriano	Feb. 17, 2022	Verbal	Industry / manufacturing (chemical production)	<p>Has Ecology reviewed EPA's TRI data; there is one plastics manufacturer in the state and Achilles in Everett is clearly involved with plastics.</p> <p>Project staff reported that they had looked at TRI data and identified two sites in Washington, however the TRI data doesn't identify smaller facilities that are below the reporting threshold.</p>
Adenuga	Feb. 17, 2022	Verbal	Industry / manufacturing (chemical production)	<p>EPA's TSCA risk evaluations for seven phthalates are another source of information; EPA published "use reports" for some of the chemicals. However, not all the uses reported are current - some reports contain legacy uses that have been abandoned over past years and may no longer be relevant.</p> <p>Project staff will review the reports and may reach out to identify which uses have been discontinued.</p>
Schreder	Feb. 17, 2022	Verbal	Products (food processing)	<p>Are components of food processing systems, i.e. conveyor belts, going to be considered?</p> <p>Agency staff indicated that these types of uses are going to be considered under the "products" category.</p>
Trim	Feb. 17, 2022	Verbal	Industry / manufacturing (manufacturing)	<p>Has a search been completed to look at all plastic manufacturing in Washington that might use phthalates? There may be quite a few manufacturers that use phthalates in plastics.</p>

Name	Date	Method	Topic (subtopic)	Input
Dunn	Feb. 17, 2022	Verbal	Industry / manufacturing (manufacturing)	<p>Have we looked at imports? China and other countries may not have the same restrictions on phthalates in certain products. Sales of such products could be more prevalent in low-income communities.</p> <p>Agency staff indicated this is an area of interest for the "products" discussion</p>
Tan	Feb. 17, 2022	Verbal	Industry / manufacturing (chemical production)	<p>Have we contacted L&amp;I about exposures in WA? Air sampling? Occupational exposure monitoring?</p>
Harmon / Adenuga	Feb. 17, 2022	Verbal	Industry / manufacturing (chemical production)	<p>In response to Tan, Harmon indicated that there are publications from CDC's NHANES reporting human biomonitoring and decreased in certain phthalates over time in response to changes in market trends; NIOSH publications (late 2000's or early 2010's) provide data on occupational exposures and biomonitoring - one of these reports addressed plastics processing, and the other, nail salons.</p> <p>Adenuga reported that Exxon compared occupational exposure data to CDC's NHANES data, finding that some occupational exposures were below the 95th percentile of phthalates found in overall human biomonitoring levels.</p>
Valeriano	Feb. 17, 2022	Verbal	Industry / manufacturing (manufacturing)	<p>As a result of CSPA phthalates are reported in clothing especially in the case of vinyl appliques and shoes. Are clothing manufacturer's represented and is that a potential exposure route?</p>
Blessing	Feb. 17, 2022	Verbal	Industry / manufacturing (chemical production)	<p>Chemical data reporting can help inform upstream sources. Data is published every 4 years, with the past reports issued in 2016 and 2020. These reports address manufacturing and importing and can inform downstream use.</p>

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Peele	Feb. 17, 2022	Verbal	Industry / manufacturing (product manufacturing)	<p>Clean Production Action's (CPA) chemical footprint project survey – asks whether companies are getting full chemical information from their suppliers. Most companies are not asking for the information. If they do ask, it takes years for suppliers to comply to get them the information. Data about unintentional use is even more rare. In the electronics sector, they are moving towards looking at manufacturing products without specific chemicals, including unintentional use getting into the final product. Another example is phthalates in conveyer belts, even if not in the final product may expose workers during production process.</p> <p>They are looking at worker exposure, largely in Asia, to chemicals that don't end up in final products but contribute to chemical exposure. CPA and others are working towards a "0 Exposure" initiative. Industries involved include Apple, Intel, HP. We need a systems ask for Tier 1 suppliers to phase out the use of hazardous chemicals. Suppliers report to brands. If you create an industry-wide demand affecting supply chain, then suppliers will need to follow up. Need a consistent, industry-wide ask. Also working to identify alternatives.</p> <p>Manufacturers are working with 3rd party certifiers (like CPA), particularly cleaners and degreasers, to create safe products. Process of certification results in greener products. We need clear criteria, and industry will respond. Clear consistent communication to put in place. CPA does not have a phthalate-free certification, but they are a 3rd party certifier for other chemicals.</p>

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Harmon	Feb. 17, 2022	Verbal	Industry / manufacturing (manufacturing)	<p>An alternative that might be good for a general consumer product might not be good for a general wiring application. Being able to meet requirements for specific applications will be difficult. There are some newer alternatives being offered but they are not being manufactured large scale and are cost prohibitive. Just because something is a plasticizer does not make it suitable to all applications. Some may have special uses and this needs to be looked at. Some ortho-phthalates are broadly used due to the fact they work very well.</p> <p>If you have a market where people want to move to alternatives, and you replace a well-tested ortho-phthalate with a decent risk assessment you need a full set of toxicological data and you need to meet all other regulatory and technical requirements. There are several databases that offer alternatives and identify their hazard profiles, such as ChemForward. The fact that an alternative is not an ortho-phthalate is not sufficient; there should be data that shows this is a viable alternative. Some molecules just don't work in certain applications. With respect to cost, availability, and commercial issues it takes a lot of time, registration requirements and money to bring a new product onto the market. Many regulatory clearances need to be worked through, causing large hurdles for industry. Government policy can have some impact but not sure how much can be done from the state government standpoint.</p>
Valeriano	Feb. 17, 2022	Verbal	Industry / manufacturing (manufacturing)	Regarding scope, the state of Washington has looked at material changes, but what about using a different material altogether? Don't we need to move away from plastics/vinyl in general? Don't just look at drop-in substitutes, consider materials other than plastics.
Berry	Feb. 17, 2022	Verbal	Industry / manufacturing (manufacturing)	Do manufacturers know the health risks of phthalates in regard to certain things such as endocrine disruptors? Are they working with communities and health departments in communities surrounding manufacturing plants?
Valeriano	Feb. 17, 2022	Verbal	Industry / manufacturing (manufacturing)	PVC manufacturing facilities should also be included.
Dunn	Feb. 17, 2022	Verbal	Industry / manufacturing (manufacturing)	Ecology also needs to look at the medical cost is in regard to phthalate exposure of the general population across the state and report the estimated impact, which could be significant to the state.

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Harmon	Feb. 17, 2022	Verbal	Industry / manufacturing (manufacturing)	<p>One of the problems with treating phthalates as class is that some are regulated. Animal studies demonstrate some phthalates with EDC health effects, but it varies between specific phthalates. quite a few don't have those effects. That's an important point. So, EDCs awareness is irrelevant.</p> <p>There are some papers available on cost of health effects, but it is important to consider that some phthalates may not contribute to costs.</p> <p>Phthalates have distinct use applications and are not easily substitutable. Some applications are hard to substitute because of exacting specifications for some applications.</p>
Adenuga	Feb. 17, 2022	Verbal	Industry / manufacturing (manufacturing)	<p>It is complicated when phthalates are put into a class because some have very specific uses. A phthalate in a fragrance cannot be used in plastic and vice versa. So, alternatives can be hard to identify. it is very difficult to find alternatives that meet manufacturer's specifications. In regard to health effects, we have risk assessments regarding these chemicals.</p>
Dunn	Feb. 17, 2022	Verbal	Industry / manufacturing (manufacturing)	<p>Ecology should find a researcher to identify the EDC characteristics of phthalates.</p>
Diamant	Feb. 17, 2022	Verbal	Industry / manufacturing (public comments)	<p>Have phthalates been used in food packaging and has packaging been identified as a source? Are there phthalates in cigarette butts? Are tires a source of phthalates? Are they used in shopping bags? Car interiors? Wire insulation?</p>
Adenuga	Feb. 17, 2022	Verbal	Industry / manufacturing (public comments)	<p>Use of phthalates in food packaging is limited, with only 3-4 commercially available phthalates used in those applications today. FDA has a 2018 survey on phthalates uses in food packaging. Outside of food packaging, phthalates aren't really used in packaging in general. More than 80% of PVC packaging is rigid vinyl. Not aware that phthalates are used in cigarette butts. Shopping bags are mainly made from polyethylene plastic.</p>
Thompson, S.	Feb. 17, 2022	Verbal	Industry / manufacturing (public comments)	<p>Are they used in tires?</p>



Name	Date	Method	Topic (subtopic)	Input
Adenuga	Feb. 17, 2022	Verbal	Industry / manufacturing (public comments)	<p>Auto tires are made of synthetic rubber/butyl rubber. Phthalates are sometimes used in auto applications; alternatives are problematic because the products need to meet OEM specifications.</p> <p>Crumb rubber from tires does not release phthalates; PVC is not used in tires.</p>
Tan	Feb. 17, 2022	Verbal	Industry / manufacturing (public comments)	There are indications that crumb rubber (from tires) releases phthalates.
McGrath	Feb. 17, 2022	Verbal	Industry / manufacturing (public comments)	In terms of helping incentives for moving away from phthalates it would be good to not just look at chemical alternatives to phthalates but rather look more broadly at alternative products that do not use plasticizers in general. For example, what is a different roofing membrane?
Shestek	Feb. 17, 2022	Verbal	Industry / manufacturing (public comments)	<p>Can Ecology clarify whether policy recommendations will be from a class perspective? Is it Ecology's viewpoint that phthalates, regardless of use and their toxicological profiles, are all the same? Hopefully regulatory action will consider exposure routes, different applications, etc.</p> <p>Ecology staff responded that the plan would take a big picture view. We are open to specific chemical input, but we are looking to make recommendations for the class. We don't necessarily consider them all the same but will consider potential impacts from the class in general. There needs to be a consistent approach across our environmental programs.</p>
David KC	Feb. 17, 2022	Verbal	Industry / manufacturing (public comments)	Need to be mindful of unintended deleterious consequences of alternative, and alternatives need to be researched before acting). Anecdotally the consequence of using soy-based automotive wiring has been a great deal of rodent damage and high repair costs.
Valeriano	Feb. 17, 2022	Verbal	Industry / manufacturing (public comments)	<p>Will Ecology look at phthalates in waste streams, including biosolids?</p> <p>Health staff identified that King County had some testing data regarding biosolids.</p>
Dunn	Feb. 17, 2022	Verbal	Industry / manufacturing (public comments)	When looking at crumb rubber from tires consider the use of this material on football fields and tracks.

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David KC	Feb. 17, 2022	Verbal	Industry / manufacturing (public comments)	Field tracks may use recycled or new rubber, or urethane.
Diamant	Feb. 17, 2022	Verbal	Industry / manufacturing (public comments)	Is there exposure in wrecking yards and in recycling? Astro turf?
Valeriano	Feb. 17, 2022	Verbal	Process	Has Ecology considered conflict of interest in regard to transparency?
Trim	March 3, 2022	Verbal	Industry / manufacturing (manufacturing)	Following up on last week's discussion about identifying businesses that use or manufacture phthalates, can identify smaller plastics producers using Washington Department of Revenue business licenses and Washington Department of Commerce information.
Harmon	March 3, 2022	Verbal	Industry / manufacturing (manufacturing)	Will follow up on reaching out to a Washington based processor.
Multiple	March 3, 2022	Meeting chat	Products (food processing equipment)	Dunn, Tan, and Sathyanayarana discussed Advisory Committee participation by an endocrinologist (as a result of phthalates' endocrine disrupting properties), for example Shanna Swan; Sathyanayarana identified that she is an endocrinologist (whereas Swan is not) and she can speak to these issues.

Name	Date	Method	Topic (subtopic)	Input
Harmon	March 3, 2022	Verbal	Products (food processing equipment)	FDA staff report (Carlos et al., 2018) is a good reference regarding what is being used, however, there have been some changes since 2018. For example, one producer of beverage cap liners switched to an alternative about five years ago. Presentations at a 2018 EDF meeting identified the use of phthalates in dairy tubing. That use has since been mostly discontinued, however know of one tubing producer that still uses them. Very low phthalate levels reported (in ppb range) need to be interpreted cautiously. In some cases, phthalates can be present as analytical artefacts—for example using pipette tips that contain DBP. Lower concentrations reported need to be placed into perspective as to whether phthalates are present or not. Another perspective is whether phthalates migrate into food. A recent article addressed phthalates in beer cap liners; Carlos et al., and BASF work confirmed DEHP can be used in cap liners. However, when asked whether phthalates had been measured in the beverage, the article's authors confirmed they had not, they had only looked at the liner. Ortho-phthalates are quite water insoluble, so they don't migrate into low alcohol acidic solutions.
Dunn	March 3, 2022	Verbal	Products (food processing equipment)	Contacting food processing companies would provide the information that is needed.

Name	Date	Method	Topic (subtopic)	Input
Sathyanarayana	March 3, 2022	Verbal	Products (food processing equipment)	Our study group has had three publications on sources of exposure, and one was an intervention study, where we tried to decrease levels but ended up increasing exposure. We looked back at foods we used and found high levels in high fat dairy products and spices. Tried to determine how the food was contaminated. When you look at production processes, there was really no place where plastic was used enough to create these levels in the spices. For high fat dairy, there are two things to think about. One is the tubing—flex tubing that has not been flushed could be a large source of exposure—but we can find the chemical makeup of tubing in general. Two, the actual food itself could be contaminated. In regard to high fat dairy, it could be in the fat that has bioaccumulated in the animal from feed. Other studies have highlighted that fast food and highly processed foods are a big source of contamination—likely from packaging. One other piece is that when we talk about phthalates, that is a broad category, but there are alternatives that may or may not be toxic. Important to be specific about which phthalates we are talking about. DEHP, in products and biomonitoring, have decreased over time, switching to DINP or other phthalates.
Multiple	March 3, 2022	Verbal / meeting chat	Products (food processing equipment)	<p>Dunn asked whether phthalates are lipophilic. Sathyanarayana answered that they are. Adenuga specified that phthalates are not authorized for use with fatty materials; they are permitted for use in contact with water and alcoholic liquids with less than 8% alcohol. Need to be cautious about phthalates found in fatty foods—sometimes find them because detection methods are very sensitive, but they are not present because not allowed by law.</p> <p>Dunn asked whether plastic containers used for dairy such as milk would be a source [of phthalates]. Adenuga replied that phthalates are not typically used in plastic containers—he recalled that milk containers are manufactured from polypropylene.</p> <p>Sathyanarayana indicated that if phthalates were present in feed, they could bioaccumulate. Adenuga responded that phthalates don't typically bioaccumulate.</p>

Name	Date	Method	Topic (subtopic)	Input
Valeriano	March 3, 2022	Verbal	Products (food processing equipment)	<p>PVC or vinyl conveyor belts can contain up to 30% DINP. (Sathyanarayana responds that can be as high as 38%.)</p> <p>A 2018 study identified that dairy inflations can be high in DIDP and DINP. (Via chat Brown explains I did a quick search on dairy inflations for my own understanding and figured that I would share: In a mechanical milking system, teat cup liners, also known as dairy inflations, operate with a vacuum repeatedly drawn on one side to stimulate milking. The other side is the first food contact surface encountered by warm milk fresh from the cow.)</p> <p>TFF worked with the dairy industry to find non-food contact materials in the facility that could contain phthalates; found vinyl mats used on floors, gloves worn by workers. Other items were present that could be off-gassing the phthalates. Other products are also used to handle fast foods. Inks and dyes in packaging are also a source.</p>
Valeriano	March 3, 2022	Verbal	Action Plan process	<p>In response to agency staff statement on reporting conflict of interest, asked for disclosure of financial conflict of interest. This is about breaking the mold and equity.</p> <p>Sathyanayarana and Tan agreed with Valeriano, and Tan indicated there are good templates available from other organizations.</p>
Dunn	March 3, 2022	Verbal / meeting chat	Products (food processing equipment)	<p>Are phthalates present in pesticides? This could result in their being present in non-organic meat.</p> <p>If phthalates are used in pesticides and Eastern Washington is mostly agricultural, with a constant summer smog that might be considered a potential source. This could be of interest to tribal communities in eastern Washington.</p>
Valeriano	March 3, 2022	Verbal	Waste systems	<p>Are phthalates released from the incinerator in Spokane? From burning of PVC? Or would they be broken down?</p>
Tan	March 3, 2022	Meeting chat	Products (food processing equipment)	<p>Could we hear more about phthalates in can and glass liners? I missed the percent allowable?</p>
Valeriano	March 3, 2022	Verbal	Products (food processing equipment)	<p>When cows are feeding on grass, what about [phthalate] contamination in the dirt?</p>

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Race	March 3, 2022	Meeting chat	Products (food processing equipment)	<p>What about the phthalates in food processing water where the plumbing is PVC piping?</p> <p>Adenuga and Harmon respond: PVC piping is rigid, you don't use phthalates or any plasticizers in those applications.</p>
Dunn	March 3, 2022	Verbal / meeting chat	Products (food processing equipment)	<p>What about PEX pipe used in homes? PEX is and has been found to leach several chemicals including di(2-ethylhexyl) phthalate, BPA, and MTBE.</p> <p>Adenuga: PEX is cross-linked polyethylene, not PVC.</p>
Godlewski	March 3, 2022	Verbal	Products (medical devices)	<p>General question—if this is regulated by the federal government, what action could be taken by the state? In other areas, have shied away from action that could be duplicative of federal action.</p> <p>Staff responded that the plan is not taking regulatory action—would look at voluntary actions, such as purchasing and clinical procedures, to reduce exposures.</p>
Sathyanarayana	March 3, 2022	Verbal	Products (medical devices)	<p>A lot of progress has been made in this area, especially in major hospitals, in intensive care and in neonatal intensive care. Flexible tubing doesn't have many alternatives—if there is no alternative, must use the least harmful option. Healthcare Without Harm provides a booklet/guide as to how to reduce flexible PVC use in the healthcare setting and how to find alternatives. A useful initiative would be to facilitate getting that information to small, regional hospitals. Most hospitals have an environmental management division (required to do so) that also manages the facility supply chain. Sometimes this falls to the hospital's environmental management division.</p> <p>Tan adds that other non-hospital clinical services should be considered: dental, other clinics, long-term care facilities, etc.</p>

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Indiveri	March 3, 2022	Verbal	Products (medical devices)	<p>Phthalates are still used in many medical applications including tubing, IV bags, respiratory—any flexible plastic. The good news is that there has been tremendous progress, but there is still a way to go. Vizient's catalog highlights which products are preferred. Catalog icons identify specific attributes, for example "free of DEHP." Vizient provides lots of education and advocates for other GPOs to do the same. But some organizations have a way to go because they may not have sustainability leads. Healthcare Without Harm is also helping. Historically, products free of toxic chemicals have had an inflated price; more recently there has been a tipping point making such products favorable. Supply chain leaders are using the catalog—but within the remainder of the organization, consultation of the catalog is spotty. Larger organizations have an allocated staff resource, but small to mid-size hospitals are still inundated by COVID and don't have staff resources to track these issues. There is transparency about products free of toxic chemicals, but it doesn't go through the entire organizational spectrum. The clinician may not know whether a product has toxic free alternatives or not. Products are not labelled as to the presence of toxic chemicals, there are no warning signs, no fine print.</p>
Multiple	March 3, 2022	Meeting chat	Products (medical devices)	<p>Tan: Are there other places the medical tubing may be used in the state besides clinics and hospitals where messaging about safer alternatives could be useful? Dental offices, schools, hospice facilities, assisted living?</p> <p>Sathyanarayana: Dental offices may use some products but not sure they would be creating major exposures. For assisted living, I would think there are exposures, but those facilities don't often buy their own equipment—the individual insurance provides to the patient.</p> <p>Indiveri: BPA, Phthalates, and Chemicals Used in Plastic <a href="https://www.saferstates.com/toxic-chemicals/chemicals-in-plastic/">https://www.saferstates.com/toxic-chemicals/chemicals-in-plastic/</a></p> <p>Sathyanarayana: I would think medical device suppliers for home and assisted living care would be a great target for Cristina's efforts.</p> <p>Indiveri: The non-acute space is a great opportunity.</p> <p>Thompson (Steve): Vinyl gloves used in many industries, including medical and food service, may contain phthalates. But there are alternatives.</p>

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Valeriano	March 3, 2022	Verbal	Products (medical devices)	<p>Kaiser was first to commit to not purchase PVC. Phase out of these products uses purchasing to create change in the market.</p> <p>Indiveri added that Vizient adopted Kaiser’s attributes in regard to requirements for suppliers. We are asking our members and suppliers to adopt our attributes because there is no standard yet. Every year we present at national conferences with all the GPOs and we say “we are giving you this information because it is the right thing to do.” Show member commitments with dollars. There is always an opportunity to improve educational efforts.</p> <p>Valeriano: Ecology could adopt those attributes and education in Washington.</p> <p>Sathyanarayana: I would think medical device suppliers for home and assisted living care would be a great target for Cristina’s efforts.</p>
Multiple	March 3, 2022	Meeting chat	Products (medical devices)	<p>Tan: What about tubing used for people on oxygen and things like sleep apnea devices...</p> <p>Schreder: I am also wondering about the presence of phthalates in medications—I know it was an issue in the recent past but do not know what if anything has been done about it.</p> <p>Harmon: PE not in pipes. It is wire and cable jacket and insulation.</p>



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Multiple	March 3, 2022	Verbal	Products (medical devices)	<p>Schreder: What could our state do within its authority? Could we request data on which manufacturers have phthalates? Does federal regulation overrule state regulations?</p> <p>Godlewski: States cannot overrule federal regulations in regard to FDA. There is an approval process which is what governs what products and devices may be used. Clarifies that it is not that chemicals are not regulated, but that the FDA has a clearance process that preempts what is done by states.</p> <p>Dunn: Is the state restricted from prohibiting a chemical in the device?</p> <p>Valeriano: Not aware of any regulation in regard to chemicals of concern in healthcare products.</p> <p>FDA preemption should be looked at closely for this area—chemicals of concern may not be regulated in these products.</p>
Garcia	March 3, 2022	Verbal	Products (medical devices)	<p>Multicare is part of Vizient and I believe that is the best avenue. I am on the sustainability side and there was a comment that environmental departments would be the best approach, but a complication is that these departments mostly focus on the regulatory aspect of these businesses and may not be paying attention to the presence of toxic chemicals in products the hospitals are using. Working through the sustainability side is the right way to go. Sustainability officers will be looking at waste issues too, there is a lot of medical waste. Need to create purchasing standards, policies, and goals. I would like to pursue this with my supply chain.</p> <p>Health staff is interested to hear if anyone has expertise about tubing in kidney dialysis centers and if this is a potential stakeholder group. Please get in touch if you have any contacts.</p>

Name	Date	Method	Topic (subtopic)	Input
McGrath	March 3, 2022	Verbal	Products (building materials)	<p>Healthy Building Network has been doing research for 22 years. We see where phthalates are still commonly used. Phthalates have not been seen in water pipes which are made of rigid PVC, so it doesn't require the use of plasticizers. The other plastic types of pipes don't require plasticizers so they could be deemphasized. Some plastic holding tanks can contain phthalates so there is a potential exposure to water there. Where we do see intentional uses includes roofing and waterproofing materials. Low slope and flat roofs need a waterproofing material; PVC roofing materials contain significant amounts of phthalates and can result in releases. Adhesives used in roofing materials can also contain phthalates. For the interior of buildings, sealants should stay on the list. Industry is starting to move away from phthalates in sealants, for example silyl polyether sealants contain phthalates. Metal coating systems including exterior metal systems such as PVDF coatings can contain phthalates; interior metal coatings include vinyl-coated rack shelving. Flooring is off the table [doesn't contain phthalates], but vinyl wall base can contain them—unknown if phthalates are being phased out of wall base, as the flooring industry is moving out of that area. (Continued in the next row.)</p>
McGrath	March 3, 2022	Verbal	Products (building materials)	<p>(Continued from the previous row.) In terms of who the project should connect with, there are different possible angles. One is green building rating systems and enterprise green communities for affordable housing, who call out phthalates in adhesives and sealants and flooring. That audience addresses affordable housing units. The Evergreen Standard in Washington has an overlay of the enterprise green communities but not sure how much has been adopted. The American Institute of Architects partners for education and outreach. Purchasing material platforms, like Material Bank, could be another opportunity to educate and influence as well. Part of the education is to make people aware that there are alternatives to plasticizers as well as different product types altogether. For example, TPO for roofing that doesn't need a plasticizer at all.</p> <p>Valeriano adds that under Evergreen Standards, avoidance of toxic chemicals provides optional points, but avoidance is not required.</p>

Name	Date	Method	Topic (subtopic)	Input
Dunn	March 3, 2022	Verbal	Products (building materials)	<p>Dunn: PEX pipes are used more commonly by plumbers and in the mobile home industry.</p> <p>McGrath: HBN's research on PEX has shown that phthalates are not common in that material.</p> <p>Adenuga: PEX is cross-linked polyethylene, it is already flexible and doesn't need plasticizers.</p>
Trim	March 3, 2022	Verbal	Products (building materials)	<p>Zero Waste Washington is testing a variety of materials for phthalates. Our report (referenced in the presentation) contains results for a variety of things. They are open to input on what else to test.</p>
Valeriano	March 3, 2022	Verbal	Products (building materials)	<p>A really important agency to work with is the Washington Department of Commerce since they are in charge of Evergreen Standards, but they need technical help from Ecology and Health in understanding this. They are in charge of a lot of the money for building affordable housing so there is a huge opportunity to educate them in incorporating these concerns. Recommend that building materials need to be considered as part of Safer Products for Washington—identify the biggest sources and consider regulatory mechanisms under the law.</p> <p>Via chat: <a href="https://www.commerce.wa.gov/building-infrastructure/housing/housing-trust-fund/housing-trust-fund-evergreen-sustainable-development/">https://www.commerce.wa.gov/building-infrastructure/housing/housing-trust-fund/housing-trust-fund-evergreen-sustainable-development/</a></p>
Schreder	March 3, 2022	Verbal	Products (building materials)	<p>Commerce also runs weatherization programs.</p>
Dunn	March 3, 2022	Verbal / meeting chat	Products (building materials)	<p>Has PEX been evaluated under heated conditions such as hot water and hemodialysis?</p> <p>McGrath responds: PEX leaching chemicals, see reference 19 at the bottom of the HBN Water Pipe Guidance. <a href="https://homefree.healthybuilding.net/products/71-water-pipes-hazard-spectrum">https://homefree.healthybuilding.net/products/71-water-pipes-hazard-spectrum</a></p> <p>Harmon responds he is not aware of any.</p>

Name	Date	Method	Topic (subtopic)	Input
Godlewski	March 3, 2022	Verbal / meeting chat	Products (building materials)	<p>Laurie, I had a follow-up question about the building materials, do you see a difference between the environmental and health exposures from external versus internal building materials? Are these lumped together as one large topic or two separates?</p> <p>Valeriano: When we look at this, we look at products used internally and externally. We look at these CAPs, which allow you to look at all of that and then consider the recommendations in light of that where these chemicals are winding up in homes, workplaces, and the environment.</p> <p>Irina Makarow: In our previous meeting we identified that this is a big picture view on how phthalates end up in the environment and how humans are exposed. The AP takes the big picture to ferret out which exposures are happening where, and how we can act to reduce these exposures.</p>
Tan	March 3, 2022	Verbal	Industry / manufacturing	<p>A question, it comes up for building materials but also all product categories. Are phthalates sometimes inadvertently created in manufacturing?</p> <p>Adenuga responds that phthalates are manufactured as an esterification process. So not likely to be a byproduct.</p>
Innes	March 3, 2022	Meeting chat	Products (other)	<p>We scanned &gt; 100 children's products made of various polymers, including PVC. All 11 we sent to the lab contained DEHP; 10 were from 97 to 400 PPM; one was PVC and grossly high (37% DEHP). The lower levels we found may or may not be intentional, but a big question raised was what is the additive effect of low-level DEHP across many types of products and polymers?</p>

Name	Date	Method	Topic (subtopic)	Input
Godlewski	March 17, 2022	Verbal / meeting chat	Products (other)	<p>With respect to the discussion last meeting regarding pesticides, was it about pesticides in consumer pesticides or those regulated under FIFRA?</p> <p>Dunn indicated that should be considering both.</p> <p>Adenuga added that pesticide inerts are regulated by FIFRA. Phthalates are approved for non-food use and cannot be used as pesticide inerts since those pesticides can contact food. Pesticide inerts are regulated by FIFRA. Use as FCMs is regulated by the FDA. No one in industry applied for FIFRA exemption to use phthalates as pesticide inerts.</p> <p>Note: Valeriano asked why phthalates are used in bottle cap liners if they are not approved for food use; the question was corrected as the discussion was about inerts in pesticides.</p>
Trim	March 17, 2022	Verbal / meeting chat	Waste systems (wastewater)	<p>10 – 15 years ago we produced a large report regarding discharges to Puget Sound; it identified phthalates in effluents. The report looked at 100 facilities in Puget Sound and identified phthalates in effluents and in mixing zones. Has Ecology looked at current phthalate presence in effluents and included this data in the Action Plan?</p> <p>Toxic-Free Future also produced a report looking at phthalates present in laundry water and dust in 6 – 8 homes:  <a href="https://toxicfreefuture.org/puget-sound-down-the-drain-new-study-shows-how-chemicals-in-shower-curtains-vinyl-floors-and-other-consumer-products-pollute-puget-sound">https://toxicfreefuture.org/puget-sound-down-the-drain-new-study-shows-how-chemicals-in-shower-curtains-vinyl-floors-and-other-consumer-products-pollute-puget-sound</a></p>

Name	Date	Method	Topic (subtopic)	Input
Multiple	March 17, 2022	Verbal / meeting chat	Waste systems (wastewater)	<p>Should consider the presence of phthalates in WWTP sludge and in stormwater.</p> <p>Harmon: Environment Canada conducted a screening including waste monitoring data, some of it more recent; it looked at 28 phthalates. The report is publicly available.</p> <p>Kinno: Noting that generally, wastewater is a "pass through" and not a source, per se. It would be very helpful to have help from Ecology in triaging sources of phthalates that show up in wastewater (such as industrial, residential/commercial, stormwater).</p> <p>Thompson (Steve): Notes the same goes for biosolids.</p> <p>Kinno: For scoping, you may consider grouping biosolids with wastewater, and not with solid waste. If you are looking at upstream sources and pathways (which I think would be the most helpful approach to address this), biosolids are a product of wastewater treatment.</p>
Trim	March 17, 2022	Verbal	Waste systems (wastewater)	<p>Combined sewer overflows can be an important source, and have resulted in higher phthalate concentrations found in sediment. Are there any requirements for sampling of these discharges?</p>
Schreder	March 17, 2022	Verbal	Waste Systems (Wastewater)	<p>Are there any requirements for sampling of phthalates in WWTP influent/effluent and biosolids?</p> <p>Ecology staff indicated that there are no regulatory requirements to sample biosolids, and that some follow-up would be needed to correctly respond as to whether influent/effluent required sampling and analysis, and then responded that phthalates listed as priority pollutants were required to be monitored by EPA. See: <a href="https://www.epa.gov/sites/default/files/2015-09/documents/priority-pollutant-list-epa.pdf">https://www.epa.gov/sites/default/files/2015-09/documents/priority-pollutant-list-epa.pdf</a></p> <ul style="list-style-type: none"> <li>• Bis(2-ethylhexyl) phthalate</li> <li>• Butyl benzyl phthalate</li> <li>• Di-N-Butyl Phthalate</li> <li>• Di-n-octyl phthalate</li> <li>• Diethyl Phthalate</li> <li>• Dimethyl phthalate</li> </ul> <p>Thompson (Steve) reported that depending on meeting certain effluent discharge volumes WWTPs (with certain discharge volumes) do test for priority pollutants. Health staff indicated that the priority pollutant list may not include some of the phthalates that have been used as replacements for legacy phthalates.</p>

Name	Date	Method	Topic (subtopic)	Input
Dunn	March 17, 2022	Verbal	Waste systems (wastewater)	<p>Dunn voiced that his understanding is that primary and secondary treatment does not remove phthalates.</p> <p>Ecology staff has reviewed some academic articles concerning phthalate removal rates in wastewater treatment systems—the articles indicate that there can be some removal, but it is not complete; staff want to get a better understanding of the methods typically used in Washington and their relative efficacy.</p> <p>Thompson (Steve) indicated that almost all WWTPs include secondary or tertiary treatment systems. Nevertheless, some phthalates are not removed by these treatments and exit the plants in effluents. Aerobic digestion further degrades phthalates; phthalates also degrade in biosolids when the biosolids are applied. There are studies that evaluate. Lauren asks for those studies.</p>
Kinno	March 17, 2022	Verbal	Waste systems (wastewater)	<p>Kinno (seconded by Valeriano) indicated that looking at upstream sources and pathways would be the most helpful approach to address this pathway—need to propose how to get upstream reductions to avoid phthalates being directed to WWTPs. The Action Plan should look at upstream sources as well as WWTP treatment processes and the ultimate impact on the aquatic environment.</p> <p>Harmon (via chat) suggests a useful reference: Phthalate Esters in the Handbook of Environmental Chemistry, Staples CA, editor. Springer, 2003, is a good reference and addresses phthalates in the environment including wastewater.</p>

Name	Date	Method	Topic (subtopic)	Input
Multiple	March 17, 2022	Verbal / meeting chat	Waste systems (solid waste & biosolids)	<p>Dunn asked whether sludge manufactured into compost at landfills was permitted for residential use.</p> <p>Ecology staff responded that sludge from industrial facilities couldn't be land applied—biosolids that meet the most rigorous standards for "exceptional quality" can be included in compost.</p> <p>Dunn followed up whether sludges were required to be tested. He also raised the scenario where sludge from smaller municipal WWTPs (e.g. Port Angeles) was transferred to a separate local facility for distribution of compost to residential customers.</p> <p>Thompson (Steve) added that phthalates are not on the list of chemicals tested in biosolids, whereas metals are tested for; "exceptional quality" is generally driven by pathogen reduction. Organic chemical testing of biosolids is quite limited.</p> <p>Schreder and Thompson discussed whether quarterly WWTP influent and effluent testing data are publicly available.</p>
Peele	March 17, 2022	Meeting chat	Waste systems (solid waste & biosolids)	<p>Cheri Peele: Similar to the comment made regarding wastewater, it is important to make the point that solid waste and biosolids are pass-through sources. If anything, due to population increase, biosolids production will continue to increase. It is important that land application be beneficial, not a source of contamination. The only way to remove phthalates is to move upstream to products.</p> <p>David (KC/DNRP/WLRD/SWS): Provided a link to additional Ecology resources:  <a href="https://ecology.wa.gov/Waste-Toxics/Reducing-recycling-waste/Biosolids/Learn-about">https://ecology.wa.gov/Waste-Toxics/Reducing-recycling-waste/Biosolids/Learn-about</a></p>
Valeriano	March 17, 2022	Verbal	Waste systems (solid waste & biosolids)	<p>Are we also talking about recycling plastics in this section as well?</p> <p>Ecology staff responded that this is part of the next discussion point.</p>



Name	Date	Method	Topic (subtopic)	Input
Valeriano	March 17, 2022	Verbal	Waste systems (solid waste & biosolids)	<p>Valeriano indicated that there are situations where uncomposted biosolid sludges are applied directly to farms. Seconded by Trim. There is a concern about chemicals leaching out of those products, running off into waters or possible uptake by plants. This has become a big issue for PFAS. Ecology needs to understand all the pathways and where along the environmental pathways do, we actually test for phthalates. CAP development is the right time to map that out and make recommendations for change. Shared experience and a resource about PFAS in Maine.</p> <p>Ecology staff offer to follow up with Valeriano regarding recent WWTP testing for PFAS in Washington state.</p> <p>Thomson (Steve) indicated that biosolids applied to agricultural crops (e.g. carrots, tomatoes) must meet the "exceptional" standard. Biosolids applied as feed [in non-agricultural situations] are only tested for metals, but not organics.</p> <p>Peele places the emphasis on upstream source reduction as the best answer to this complex distribution of phthalates in wastewater/biosolids, downstream environmental media.</p>
Snyder	March 17, 2022	Verbal / meeting chat	Waste systems (solid waste & biosolids)	<p>Landfills and landfill leachates are also an important issue. We will always have phthalates in landfills if upstream production persists.</p> <p>Trim asked whether landfill leachate is directed to WWTPs in Washington and whether leachate is tested for phthalates.</p>
Trim	March 17, 2022	Verbal / meeting chat	Waste systems (solid waste & biosolids)	<p>Here are a couple of articles about the topic of phthalates migrating to the exterior of products. This may be a problem for old containers people have in the backs of their kitchen cabinets (this seemed to be the case for me):</p> <p><a href="https://cool.culturalheritage.org/waac/wn/wn32/wn32-2/wn32-204.pdf">https://cool.culturalheritage.org/waac/wn/wn32/wn32-2/wn32-204.pdf</a></p> <p><a href="https://www2.mst.dk/Udgiv/publications/2016/08/978-87-93529-01-4.pdf">https://www2.mst.dk/Udgiv/publications/2016/08/978-87-93529-01-4.pdf</a></p> <p>I think it is an environmental justice issue if old items are donated to Goodwill, etc. and then the older items then create dermal impacts on the purchasers of those items.</p>

Name	Date	Method	Topic (subtopic)	Input
Dunn	March 17, 2022	Verbal / meeting chat	Waste systems (wastewater)	<p>Dunn: How many WWTPs have tertiary treatment?</p> <p>Ecology staff: Most of the plants are secondary, a few tertiary; expect the number to go up with the Nutrients to Puget Sound permit in about 5 years.</p> <p>Thompson (Steve): Tertiary treatment is geared towards phosphorous and nutrient removal, not necessarily biosolids; also need to look at the phthalate exposure route—biosolids to humans, via plants are limited exposure routes—exposure to fish in river is different. Ecology staff agrees that the point is nutrient removal, but there may be some co-benefit; don't have any tertiary treatment that addresses CECs, other than ozonation and granulated carbon.</p>

Name	Date	Method	Topic (subtopic)	Input
Multiple	March 17, 2022	Verbal / meeting chat	Waste Systems (Solid waste & biosolids)	<p>Ecology staff provides insight regarding biosolids land application. It is accurate that we currently don't test for phthalates partly because we don't have a validated method to do that. From some of our recent data it was estimated that 86,000 tons of biosolids were applied to land in Washington. But that amount went on to 1% of Washington acreage. About 15 million acres of land in Washington are agricultural. If we hope to get phthalates out of our treatment plants and biosolids the most efficient way will be to target sources.</p> <p>Valeriano: Appreciates Ecology's perspective and agrees that prevention is really the only solution. However, that is a lot of biosolids to a small percentage of land. Not having validated methods for studies isn't an excuse to not test. Referred to the PFAS situation in Maine (<a href="https://www.newscentermaine.com/article/tech/science/environment/pfas/maine-farmers-push-for-tens-of-millions-to-address-pfas-contamination-department-of-environmental-protection-maine-toxic-chemicals-sludge/97-b06a3902-a124-46ac-80db-c65b23045975">https://www.newscentermaine.com/article/tech/science/environment/pfas/maine-farmers-push-for-tens-of-millions-to-address-pfas-contamination-department-of-environmental-protection-maine-toxic-chemicals-sludge/97-b06a3902-a124-46ac-80db-c65b23045975</a>). It is very concerning that we are putting this amount of biosolids out there without testing for harmful chemicals.</p> <p>Schreder: What is it specifically Ecology would be looking for in a validated method? Did a quick search and found an EPA method for testing sludge.</p> <p>Ecology staff couldn't offer more information on validation method at the moment. On the phthalates front, don't want to misconstrue the information that the only reason Ecology is not testing is the validation issue, funding is also an issue. Don't want to spend such a large amount just to have the EPA come back with different standards and processes. When Ecology requires new methods at WWTPs, there is a big implementation cost that is borne by communities.</p> <p>Valeriano: Testing will allow us to drive the front end solutions where we remove phthalates from the direct sources (producers). It can be done without the context of all this stuff. We have to think creatively, but we need data too.</p>

Name	Date	Method	Topic (subtopic)	Input
Kinno	March 17, 2022	Meeting chat	Waste systems (solid waste & biosolids)	When thinking about sources, might be helpful to think about distinctions of form. In general, solid waste is solids (garbage, yard waste, etc.). Wastewater is more likely from contact with soluble phthalates upstream. (hypothesis). Understanding the different sources is key to addressing them in the different/separate pathways.
Tan	March 17, 2022	Meeting chat	Waste systems (solid waste & biosolids)	There seem to be studies in the literature that have looked at this in multiple other places. Are we able to make some estimates about what we may have in our biosolids (for the compounds that can be tested) based on these studies? Has Ecology done this?
Race	March 17, 2022	Verbal	Waste systems (solid waste & biosolids)	Race: EPA 8270 should be able to pick up phthalates. For the phthalates not covered directly by the analysis, you can work with labs to add other phthalates.  Thompson (Steve): EPA SW-846 Method 8061A is a validated EPA analysis for "phthalate esters in aqueous and solid matrices."
Valeriano	March 17, 2022	Verbal	Waste systems (recycling)	In the big picture, if talking about a circular economy, recycling and reusing, have to have a clean approach and can't recycle toxic products. Would put PVC at top of the list, because there is no real recycling of PVC, chemical recycling is just burning, just very problematic. The AP should have a clear approach that is big picture that no toxics should be recycled; there needs to be better coordination between Ecology programs and keeping toxics out of recycling and addressing the worst though action plans and Safer Products for Washington.  Adenuga: PVC is recyclable and recycled.  Valeriano: Notes disagreement.  Trim: Seconds Valeriano, adds that can look at the new plastics PACT list of problematic materials—corporations have agreed to that and phase out by 2025; PVC is important because of toxics.

Name	Date	Method	Topic (subtopic)	Input
Multiple	March 17, 2022	Verbal	Waste systems (recycling)	<p>Godlewski asks for more explanation about disagreement on certain recycling processes—when use incineration or high heat they capture off gassing for reuse and there is limited exposure to the broader environment.</p> <p>Valeriano: NRDC has written a piece with concerns and recycling disillusionment:  <a href="https://www.nrdc.org/experts/veena-singla/chemical-recycling-summer-disillusionment">https://www.nrdc.org/experts/veena-singla/chemical-recycling-summer-disillusionment</a></p> <p>Trim add: It is true that you are often distilling it into reusable materials, but you end up with a toxic sludge. Not sure about chemical recycling for PVC.</p> <p>Valeriano: In general, concerned that because PVC is so difficult to recycle and also contaminates waste that pyrolysis, etc. will be seen as the solution to address PVC wastes.</p> <p>Shestek: The term "chemical recycling" can include a number of different technologies so would not be appropriate to lump them all into the general category of incineration.</p>
Trim	March 17, 2022	Verbal	Waste systems (recycling)	Much packaging is already moving away from PVC; manufacturers are recognizing that it is problematic.
Tan	March 17, 2022	Verbal	Waste systems (solid waste & biosolids)	We should ask about uptake into plants.
Tan	March 17, 2022	Verbal / meeting chat	Waste systems (recycling)	<p>I've heard that additives are required to make certain plastics recyclable but it's not clear what these additives are. Do we know if phthalates are added in these cases?</p> <p>Harmon: Don't have a lot of information and this is not PVC specific. Some things like antioxidants may be required to add into materials. Colleagues are looking into more sustainable options. Not sure if phthalates or other plasticizers are used.</p>
Snyder	March 17, 2022	Verbal	Waste systems (recycling)	The solid waste industry mainly deals with mechanical recycling. The feedstock material does not undergo any change in chemical formulation during this recycling process. A way to improve is to eliminate wishful recycling, it is helpful to understand which materials should not go into the recycling bin.
Valeriano	March 17, 2022	Verbal	Waste systems (recycling)	Pyrolysis, e.g. medical wastes, is a form of incineration. Concern is that because PVC is difficult to recycle that pyrolysis will be used as the solution. Keep PVC and phthalates out of the products, so that we have materials that are truly recyclable or can be recycled in a real way.

Name	Date	Method	Topic (subtopic)	Input
McGrath	March 17, 2022	Verbal	Waste systems (recycling)	Highlights the issue with legacy chemicals of concern, highlights need for transparency at every step of the process. Even though plastics may not contain phthalates, there may be additive that could (or not) have impacts down the road. Recycling also has infrastructure challenges; just because an item can be recycled, doesn't mean it will be—challenges can occur at infrastructure, collection, financial incentive levels. Infrastructure investment is critical; in addition, investing in alternative assessments and in full chemical/full hazard assessments will set us up for future recycling successes.
Dunn	March 17, 2022	Verbal / meeting chat	Waste systems (recycling)	Is there a waste product from pyrolysis?  Valeriano: yes.  Shestek: Chemical recycling can include many technologies – not appropriate to lump into general category of incineration.
Peele	March 17, 2022	Verbal	Waste systems (recycling)	On circular economy, Chelsea center for recycling technology, looks at markets for materials that can be recycled, some of these turn out to be inherently toxic products.  Need to move toward circular economy that considers whether items should be recycled that contain chemicals of concern, need to address this upstream in source products. Create products that can be recycled without posing hazard to humans and the environment.
McCarville	March 17, 2022	Meeting chat	Waste systems (recycling)	With strong support from industry groups, states are increasingly adopting legislation exempting pyrolysis and other advanced chemical recycling technology from tougher regulation, raising the bar for EPA as the agency considers whether to subject the facilities across the country to tough incinerator emissions standards  Note: Speaking on behalf of herself, not U.S. Air Force.
Race	March 17, 2022	Meeting chat	Waste systems (recycling)	Encapsulation could be used as part of the recycling/reuse path.
Valeriano	March 17, 2022	Verbal	Waste systems (recycling)	Is there an inventory of products that may enter recycling stream that could contain phthalates?  Health staff answered that there is no inventory to our knowledge, but that would help to understand where the key input points can be.

Name	Date	Method	Topic (subtopic)	Input
Multiple	March 17, 2022	Verbal / meeting chat	Waste systems (recycling)	<p>Valeriano: Does Teresa McGrath know of paints or building materials being recycled?</p> <p>McGrath: Paints are not typically recycled. The volume of building materials recycled is very low; building materials are the 2nd biggest users of plastic materials.</p> <p>Dunn: The majority of building materials end up in landfills.</p> <p>Evans: Regarding Paint, we now have PaintCare in Washington state—where households and businesses can take their unwanted, leftover paint. PaintCare does recycle a portion of the paint collected.</p>
Dunn	March 17, 2022	Verbal	Waste systems (solid waste & biosolids)	<p>Do any of the Washington reservations have unlined landfills or subpar management of leachates? This is common in tribal communities in Alaska.</p> <p>Ecology staff answered that there are no active WA tribal landfills that are unlined, but would have to check regarding legacy landfills. Most waste gets transferred to large state facilities such as Roosevelt.</p>
Race	March 17, 2022	Verbal	Waste systems (recycling)	Phthalates should be investigated in grey water.
Trim	March 17, 2022	Verbal	Waste systems (solid waste & biosolids)	Wanted to raise the issue in regards to construction materials in home. The issue with fires burning construction materials (wildfires) causes airborne exposure. Especially looking at Southern California.

Name	Date	Method	Topic (subtopic)	Input
Multiple	March 17, 2022	Verbal / meeting chat	Waste systems (solid waste & biosolids)	<p>Innes: If there is MSW incineration in Washington, are you considering phthalates' fate in typical incinerator conditions? I'm not sure we have this information for Minnesota's incinerators.</p> <p>Valeriano: Yes, there is one incinerator in Spokane.</p> <p>Garcia: We talked pyrolysis, but there is lots of incineration going on. Maybe it's with understanding the difference between the two in terms on impact to environment. Medical waste commodities that go to recycling or to municipal solid waste will have an incineration component, such as at the incinerator in Spokane where there is waste to energy incineration. On the recycling side in Puget Sound, some products that don't have a market will go to waste to energy. Waste to energy is the norm and should understand what that means, long term is to move the chemicals out of the products to avoid altogether.</p> <p>Dunn: Incineration of plastics releases dioxins, furans etc., important to consider.</p> <p>DeCaria: All incineration results in emission, for example wood leads to dioxins and furans.</p>
Valeriano	March 17, 2022	Verbal / meeting chat	Parking lot	<p>When we talk about products can we also talk about where phthalates are being produced and manufactured, or products imported, the communities where the products end up and where they are being incinerated. The chemicals made elsewhere wind up in the products we use. There is an EJ component for these communities.</p> <p>Adenuga: Phthalates are not manufactured in the State of Washington. Also, EPA is considering EJ aspects in the ongoing risk evaluations.</p> <p>Valeriano: Are there amounts produced in the assessments?</p> <p>Adenuga: Yes, that is covered in the EPA assessments.</p>
DeCaria	March 24, 2022	Meeting chat	Waste systems (recycling)	<p>Please refer to the Vinyl Institute for information regarding PVC recycling. The U.S. Plastics Pact is not an authoritative source.</p>



Name	Date	Method	Topic (subtopic)	Input
Adenuga	March 24, 2022	Verbal / meeting chat	Environment (air)	<p>The definition of pseudo-persistence was requested.</p> <p>McCarville provided: Pseudo-persistence—chemicals continually infused to the aquatic environment essentially become “persistent” pollutants even if their half-lives are short. Their supply is continually replenished. These can be referred to as pseudo-persistent chemicals (Daughton, U.S. EPA 2005).</p> <p>In response to Godlewski, Health staff explained that "persistence" was in quotation marks to convey that phthalate emissions re-contaminate the environment in an ongoing manner.</p> <p>Ecology staff in chat: Think about a bathtub. For truly persistent chemicals, the drain doesn't work. For pseudo persistent chemicals, the drain works, but the faucet is on full blast. Either way, the bathtub overflows eventually.</p> <p>Adenuga in chat: I think the real issue is the "persistent" tag can be misleading. Phthalates are very readily biodegraded. Adenuga further added that he was not sure about how bathtub overflows eventually—this implies removal is far less efficient. Much of the measurements we’ve found are low, in ppb levels, in many cases. Removal rates and background levels should be considered. Formaldehyde example. Persistent term is misleading.</p>
Valeriano	March 24, 2022	Verbal / meeting chat	Environment (air)	<p>Phthalates are the main plasticizers that are used in vinyl. Plastics industry is growing so rapidly and uses fossil fuels. Our state is a leader in climate change, so this upstream piece for phthalates needs to be captured.</p> <p>DeCaria: It is about context. Where and why are these materials being used in the first place? Where are they being used in the context of substitute materials? Need lifecycle assessment to know for sure. In many cases, we’ve looked at various product categories (e.g., building materials) and others in regard to climate change impact or water impact is favorable by using the material and considering end of life scenarios.</p> <p>Valeriano in chat: We would not agree with the lifecycle of PVC having lower climate impacts—just want to be clear.</p>

Name	Date	Method	Topic (subtopic)	Input
Trim	March 24, 2022	Verbal / meeting chat	Environment (air)	<p>Should look at air emissions (dusts/particles) from auto wrecking yards and building demolition. Phthalates in automotive materials could be released during wrecking. Some sites in the Duwamish area. Could we monitor to see what's in the air there?</p> <p>Ecology staff asked whether the comment was addressing automobile shredding.</p> <p>Adenuga indicated that there are restrictions on the kinds of plasticizers that can be used in cars. Those used in cars are long chained and he has not seen anything below C8. He worked on a vacuum project with EPA in automobiles, phthalate levels were basically undetectable. The chances that C10-11, 13, are in air and dust is extremely unlikely. There may be some in interior leather and interior dashboards; C8 and above are used for these plasticizers.</p> <p>Trim reported that ZWW found phthalates in brake pads; Adenuga indicated that if it was not a PVC part it could be something else that was detected.</p>
Fanning	March 24, 2022	Verbal	Environment (air)	<p>Health staff raised that long-chained phthalates are found in house dust and asked what was the fate of these semi-volatile phthalates.</p> <p>Adenuga Identified that there are two studies available; detection is low.</p>
Schreder	March 24, 2022	Verbal	Environment (air)	<p>Refer to Great Lakes Integrated Atmospheric Deposition Network (IADN), urban and rural communities included in air monitoring. The studies haven't included phthalates but have been useful to capture atmospheric deposition of a wide range of compounds in urban and rural areas. Might want to consider a similar program for Puget Sound area and maybe include phthalates.</p>
Dunn	March 24, 2022	Meeting chat	Environment (air)	<p>As far as an air source, since I understand that phthalates are used in pesticides and that pesticides are frequently sprayed in Eastern Washington, Ecology might consider monitoring in that area.</p> <p>Adenuga: Hi Larry, phthalates are not used in pesticides. They are not regulated under FIFRA for that use.</p>
Nelson	March 24, 2022	Meeting chat	Process	<p>Will the "scope input" slides Sascha is taking notes on be distributed to advisory committee members after the meeting today?</p>

Name	Date	Method	Topic (subtopic)	Input
Harmon	March 24, 2022	Meeting chat	Environment (air)	There are also some publications, mostly from Europe, that appear to show that phthalates in dust are not bioavailable, i.e., present in dust and inhaled or ingested but don't lead to exposure per se. We can provide the references.
Trim	March 24, 2022	Verbal	Environment (stormwater, sediment)	ZWW Phase 1 study is looking at exterior use products (items used outdoors: paints, building siding, automobile uses, signage); Phase 2 is underway looking at additional products.
Trim	March 24, 2022	Verbal	Environment (stormwater, sediment)	Surface water columns, groundwater should also be looked at; particular interest in groundwater due to interest in using treated wastewater effluent to replenish groundwater.  Thompson (Steve): His experience in Oregon is that this type of treated effluent needs to meet drinking water standards before it can be discharged to ground.
Valeriano	March 24, 2022	Verbal / meeting chat	Environment (stormwater, sediment)	Is there a drinking water standard for phthalates? Advocates for looking at drinking water phthalate levels.  Health staff thinks that there are standards for six individual phthalates, but the science may need updating. Phthalates exhibit a range of solubilities.  Adenuga adds that they mostly partition to sediments, not the water phase.  Harmon (in chat): I believe DEHP is the only one with a limit. 0.4 mg/L.
Dunn	March 24, 2022	Meeting chat	Environment (stormwater, sediment)	Dunn: There are a lot of vinyl side panels on houses in Washington state, would that be considered a source?  Adenuga: Vinyl siding does not contain any plasticizers—phthalates or otherwise. Siding is a rigid product. However, since it is very thin, it does often get confused for being flexible.
Multiple	March 24, 2022	Verbal	Environment (soil)	Valeriano: Are there PVC hay bale wraps, maybe they are not all PE.  Dunn: What about packaged mulch and soil, the wrapping—seems like everything is plastic?  Adenuga: Some phthalates were previously used in polypropylene films, but levels used are very small (ppb). Actually use polypropylene, not polyethylene for these films.

Name	Date	Method	Topic (subtopic)	Input
Valeriano	March 24, 2022	Verbal / meeting chat	Products	<p>Could the Vinyl Institute or Exxon provide a list of all the products and amounts of phthalates for each product use?</p> <p>DeCaria: There is a long list and a wide variety, tough to know where everything is going. We did a survey on curbside collection of all plastics to see what products are in there that use PVC. The number is very small, 30 – 50 categories maybe, but hard to categorize all uses.</p> <p>Valeriano: Looking at EPA information on phthalates and where they would be produced, every column is CBI, no information is shared from manufacturers on how much and in what products; we need that data.</p> <p>DeCaria: The issue is with supply chain; right now, folks are protecting their business, who they’re buying from. The Vinyl Institute is advocating for supply chain transparency. We want to communicate where products come from and where they go. However, with mom-and-pop shops and family business, they’re not going to give up their secret sauce.</p> <p>Valeriano: Exxon knows how much they produce, pounds, tons, and what goes into products.</p> <p>Adenuga: Use reports for all substances undergoing TSCA risk evaluation are available in the federal dockets. Example for DBP - <a href="https://www.regulations.gov/document/EPA-HQ-OPPT-2018-0503-0023">https://www.regulations.gov/document/EPA-HQ-OPPT-2018-0503-0023</a></p> <p>Valeriano: Thanks very much, but this does not have amounts of phthalates for each facility. It mostly says withheld.</p> <p>Adenuga: IHS [Markit] report is available and contains information about volumes. EPA use reports contain the information you’re looking for.</p>
Fanning	March 24, 2022	Verbal / meeting chat	Environment (soil)	<p>What about plastics and PVC uses in irrigation pipes? (farm plastics)</p> <p>DeCaria: Irrigation pipes do not use plasticizers. It’s a rigid, pressure-bearing material.</p>
Dunn	March 24, 2022	Verbal	Environment (biota)	<p>Would probably want to look at sand lance and herring. Herring use sea grass as an egg laying substrate.</p>

Name	Date	Method	Topic (subtopic)	Input
Christie	March 24, 2022	Verbal	Environment (biota)	<p>With respect to analysis of fish tissues I was seeing that phthalates are metabolized through monoesters. There is a good correlation between monoester and parent phthalate in term of concentrations. So good to look at monoesters to get more accurate measurements of parent phthalate concentrations.</p> <p>As to which fish tissues to sample, it depends on the phthalate molecular weight. Higher weights are typically present in the liver and lower appear in the kidney. For human exposure we look at muscle tissue. That does not take into consideration cultural differences where people eat different parts of the fish. Recent studies out of China and Taiwan identify that while phthalates are present in fish, most species are still safe for human consumption.</p> <p>DeCaria: Are there specific enzymes in the fish species that are able to facilitate the breakdown of the diester into the monoester and what else could be contributing to that breakdown? My understanding that these enzymes are not present in, say, a landfill so is this something exclusive to aquatic species?</p> <p>Christie: I don't have that information right now.</p>
Schreder	March 24, 2022	Verbal	Environment (biota)	<p>Reading about reference doses, we should look at those numbers carefully. Also are there any conclusions from fish studies applicable to Puget Sound?</p> <p>Christie: Mainly, diet is a significant exposure pathway, and much more spread out. Fish can metabolize phthalates, so they are not contributing that much to the risk component. Concentrations in fish tissue are not exceeding screening values at moment of consumption/analysis.</p>
Valeriano	March 24, 2022	Verbal / meeting chat	Environment (biota)	<p>But what if you looked at all of the chemicals together with the same toxic endpoints?</p> <p>Adenuga: There are safe limits for risk assessment, like the Canada risk assessment and European human health risk assessment for phthalates that are publicly available. NHANES data is probably the best source to reflect all exposure sources in humans. It reflects mixtures. The rapid metabolism of phthalates means NHANES is a snapshot in time for exposure. But the advantage is you can see large population level exposures.</p>

Name	Date	Method	Topic (subtopic)	Input
Harding	March 24, 2022	Meeting chat	Environment (biota)	<p>To Christie: Do you know of analytical labs analyzing for monoesters/phthalates in tissues?</p> <p>Christie: I do not, I would imagine most of the major labs have some capability. Whether the methods they offer are validated or applicable to biota I do not know.</p>
Fanning	March 24, 2022	Verbal	Environment (biota)	<p>Project staff are interested in sensitive species, in addition to human health exposures.</p> <p>Adenuga: Canada risk assessment includes sensitive species too, in addition to lifecycle, and human health. Europe's report is the most comprehensive and addresses the entire life cycle of phthalates. These are excellent sources.</p> <p>Trim: Ecology does not seem to do much biota testing, but I would suggest looking at the superfund reports as there are reports from the Duwamish and other sites that have data on phthalates in biota, sediment, the water column, etc.</p>
Sathyanarayana	March 24, 2022	Meeting chat	Environment (biota)	<p>We know that high fat foods like meat and dairy have high phthalate concentrations, which suggests it's either environmental sediment, or vegetation/feed that's being contaminated.</p>
Dunn	March 24, 2022	Verbal / meeting chat	Environment (biota)	<p>NHANES underrepresents minorities and indigenous populations.</p> <p>Sathyanarayana: I think NHANES oversamples minority populations and that's why there are weights used in their analyses. NHANES recommends sample weighting in all epidemiological investigations to better represent the general population. These are used in any well done NHANES epidemiologic analysis.</p>

Name	Date	Method	Topic (subtopic)	Input
Tan	August 8, 2022	Verbal	General Information	<p>Regarding the restriction just around ortho-phthalates, how would other phthalates in the state be covered, as things evolve? CAP documents have traditionally been a good resource, especially at a local level. They have served as a good basis for information, as a baseline as things have changed. Some sort of background on the whole class of phthalates should be included</p> <p>Health staff responded that the project team will provide a rationale in the AP for why this plan will focus on ortho-phthalates. There are discussions going on in the background, talking about how to address other kinds of plastic products and chemicals in products. There is recognition that some of the other phthalates may come up in the future. We look forward to feedback on how we develop the rationale. In the past, CAPs have provided detailed research/reference material in the background sections; we acknowledge there are some tradeoffs with the approach we chose.</p>
Dunn	August 8, 2022	Verbal	General information	Did you see the EPA announcement on the proposed TRI reporting rule about DINP?
Adenuga	August 8, 2022	Meeting chat	Environment (air, water, soil).	Fate and transport mechanisms are important in understanding how or if certain substances will end up in the environment and during which phases.
Trim	August 8, 2022	Meeting chat	Process (implementation)	<p>Who is the implementation team?</p> <p>Ecology staff responded that there are two new positions. We have a pile of past CAPs that the implementation team is going to be working on. The implementation team will put together a prioritized list of the projects; that will include looking for funding sources.</p>

Name	Date	Method	Topic (subtopic)	Input
Multiple	August 8, 2022	Verbal	Process (timeline)	<p>Tan: We won't see the recommendations until when? There won't be any more discussions until you have the recommendations developed?</p> <p>Ecology staff responded the next meeting(s) will be early October. We will not have the recommendations fully written, just the start of the project areas. This will give you an idea of where we are going and to make sure we are not missing anything.</p> <p>Adenuga: Are you saying that we'll have draft recommendations by October of this year?</p> <p>Ecology staff responded that not all of the details will be included, but the general idea of what we want to recommend we hope to have ready by early October.</p>
Dunn	August 8, 2022	Verbal	General information	<p>Are you doing a PFAS CAP? Have you seen the published study from last month about Florida oysters?</p> <p>Ecology staff responded that we finished the PFAS CAP in 2021. We will be working on implantation.</p>
Tan	August 8, 2022	Verbal	Process	<p>How does Ecology and Health envision the AC workshops working? Will we be reviewing recommendations or coming up with new recommendations?</p> <p>Ecology staff stated some of both and encourage AC to bring new recommendations, we will review existing recommendations, and we hope to fill in relevant information that is missing. We are open to suggestions on how we can structure those workshops.</p> <p>Tan: I'd recommend giving us a heads up on what you want from us, ahead of time.</p>
Snyder	October 25, 2022	Verbal	Environment (biota)	<p>If there are 25 years of data, what are the trends in that data?</p> <p>Project staff responded that Puget Sound sediment monitoring doesn't show a lot of clear trends.</p>



Name	Date	Method	Topic (subtopic)	Input
Tan	October 25, 2022	Verbal	Environment (biota)	<p>How will you look at phthalates in fish, and consider cumulative health effects?</p> <p>Project staff responded that we would have a section on cumulative exposure in the document, drawing on authoritative reports. The DOH fish advisory program does consider cumulative exposure, as well as aggregate exposures through our Relative Source Contributions, when we set screening levels. Cumulative metrics will be considered but as mentioned by the speaker, the fish advisory program is currently waiting for data on fish tissues before moving forward.</p>
Tan	October 25, 2022	Verbal	Process (resources)	<p>It would have been helpful to have documents ahead of time, it is very difficult to comment thoughtfully on recommendations we are seeing for the first time, it is very difficult to comment thoughtfully on recommendations we are seeing for the first time. It is also hard to remember what was on a previous PowerPoint slide.</p> <p>Schreder indicated agreement with Tan.</p>
Schreder	October 25, 2022	Verbal	Environment (air)	<p>I appreciate desire to collect new data, but we do have some data. The purpose here should be to identify the key actions to reduce exposure, based on currently available information. Could the agencies look at more data in the near term, next months or so, and come up with stronger recommendations to reduce exposure while writing the plan?</p> <p>Ecology staff responded that we will be looking more closely at exposure reduction at the 11/3 meeting.</p> <p>Shreder: We need to understand the pathways. For example, what's the analysis on the emission data Gary talked about. Can we get some analysis of how much is coming out of that Tesoro or Snohomish site and understand whether that is a large or small exposure impact.</p>

Name	Date	Method	Topic (subtopic)	Input
de Leon	October 25, 2022	Meeting chat	Waste systems (stormwater, sediment)	<p>City of Tacoma has 20 years of stormwater data and stormwater sediment trap data that shows statistically significant reductions of DEHP.</p> <p>de Leon provided the link to the data at the request of project staff:  <a href="https://www.cityoftacoma.org/cms/One.aspx?portalId=169&amp;pageId=12065">https://www.cityoftacoma.org/cms/One.aspx?portalId=169&amp;pageId=12065</a>. I wouldn't discount Air as a major source to surface waters and stormwater (rain wash off from surfaces where DEHP deposits on surfaces)</p>
Heine	October 25, 2022	Meeting chat	General information	Are the 6 phthalates proposed for monitoring DCHP, DEP, DIBP, DBP, DnHP and BBP? (The phthalates identified in the Children's Safe Products Act)?
Sandie	October 25, 2022	Meeting chat / verbal	Environment (biota)	If we control source inputs, then we still need to monitor in biota to confirm that source reduction programs are having an impact.
Evens	October 25, 2022	Meeting chat / verbal	Environment (biota)	Could the draft recommendations that propose a new study have a section added to clarify how the evaluation data will be used? EG for fish levels, can say that we will evaluate fish tissue levels and .... (Use the data to assess whether fish consumption poses a human health risk, for example).

Multiple	October 25, 2022	Verbal	Process	<p>We did a whole scoping process months ago, but there is no document that shows what the status of the chemical class is in the state. We don't have a basis for making recommendations yet. Where is a document that shows the "state of the state"? We can't evaluate recommendations without some basis of facts.</p> <p>Slide #22: "reach out to air agencies" is that really a recommendation? If so, just do it now! And "evaluate the cost" should be done now as part of developing the CAP not as part of what you recommend will be done later.</p> <p>Ecology staff responded that NEP grant funds require completion in 2023. We also wanted to make something more streamlined. Partly because of time/resource limitations. Also, because phthalates are well studied, despite data gaps in Washington. We went over with you at the August meeting what the report would look like: it will not have extensive chapter coverage on background science that prior CAPs have had. The meat of it, controls on sources, will be discussed on 11/3. This may not be what you've seen in prior CAPs. With regard to interacting with other groups, e.g., local air authorities-- we are doing some of that background coordination in some of our topic areas although some of it will be done later as recommendations.</p> <p>Trim: you say we have enough data on phthalates that we don't need background chapters. But the tone of the PowerPoints just now was that we do NOT have data and need studies because we don't know anything. But there is some data out there! And coming back to my earlier point: how can a committee evaluate recommendations without background data.</p> <p>Project staff clarified although we do not have data in fish, we have some preliminary literature data that raises the concern about phthalates in biota. We want some time to confirm those literature findings, and to look at methods we could apply here. We do have a draft 2-pager, which we will be editing, but it's up to Cheryl to figure out how and when to distribute.</p> <p>Ecology staff added that we are relying on information that is already out there for what we are deciding to recommend. We may not need to summarize all the</p>
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Name	Date	Method	Topic (subtopic)	Input
				<p>available information in order to propose recommendations. There will be some of that in the document, but it might not be presented in the format that is familiar. We also want background data to be useful and accessible to partners who will be working on the recommendations, so we are targeting background information to each section. Our purpose was to involve the AC early in the process so that we could get your thoughts and input all along the way.</p> <p>Trim: Can new recommendations be added as you continue to develop the plan?</p> <p>Ecology: Yes, and we will check in with you.</p> <p>Tan: I agree with what was said. It would be great for future meetings to have some background document to aid in preparation.</p>
Evens	October 25, 2022	Verbal	Process (resources)	<p>I appreciate the documentation in the large CAPs. I regularly refer to several of them (lead, PFAS), even as they age. Even if there is a lot of information out there, it is nice to have it in one spot and tailored to WA.</p> <p>Ecology: Those are required parts of a WAC 173-333 CAP. This is a different type of document. As we move forward in the future, we will have to work out the balance. This is the first time doing an action plan outside of the WAC -- we are working out the process.</p>
de Leon	October 25, 2022	Verbal / meeting chat	Environment (biota)	<p>Have you looked at the data generated by the superfund investigations in commencement Bay and Duwamish? The past phthalate work group report? There was toxicity testing for DEHP on biota and some air deposition studies by Tacoma, Seattle and Batelle. You said you were building off the reports done in the past (e.g., air deposition studies), so are you building off that?</p>
Adenuga	October 25, 2022	Meeting chat	Waste Systems	<p>Environmental fate and transport data for phthalates is available in the State of the Science reports published by Health Canada in 2017. They are detailed level III fugacity models.</p>
Thompson	October 25, 2022	Meeting chat	Waste Systems (biosolids)	<p>It might be interesting to study how different digestion, or other biosolids production processes (lime stabilization) impact the breakdown of phthalates.</p>
de Leon	October 25, 2022	Verbal / meeting chat	Waste Systems (biosolids)	<p>We need to be looking at ppb levels in influent/effluent.</p>

Name	Date	Method	Topic (subtopic)	Input
Multiple	October 25, 2022	Meeting chat	Waste Systems (recycling products and packaging)	<p>DeCaria: The presentation indicates a concern that “studies” are needed. We can provide you with a list of packaging materials that use phthalates. We’re happy to work with you, that’s why we’re on the advisory committee.</p> <p>Heine: Bottle caps have flexible PVC, that would affect recycling of the material they were capping. FDA has reopened comment period on phthalates. In chat: bottle and jar caps often have flexible PVC in them which still contain DEHP; also, pls see the recently opened comment period at FDA that is reviewing the use of phthalates in food contact materials/packaging</p>
DeCaria	October 25, 2022	Verbal	Waste Systems (recycling products and packaging)	<p>Think about what methods are used to recycle glass that uses phthalate-containing lid liners. Cans, although they have mostly used epoxies now, those would go into a furnace and destroy phthalates anyway. What about the glass?</p> <p>Ecology staff asked if they have the percentage of phthalates in packaging product? We are interested in any information on the topic, thank you for the offer.</p>

Name	Date	Method	Topic (subtopic)	Input
Multiple	October 25, 2022	Verbal / meeting chat	Waste Systems (recycling products and packaging) & process (resources)	<p>Tan: Will Ecology explore how these items are recycled as well? I know that additives are needed for some recycling and would be good to know if any of those additives are phthalates.</p> <p>Adenuga: Phthalates are not needed for recycling. They are strictly used to soften PVC.</p> <p>Ecology staff indicated that they would look into it.</p> <p>Trim: Please, not more studies! On packaging, there is data from across the world on phthalates in packaging. Products are not unique to WA. Phthalates are getting into food, wildlife etc. we need action. State has authority to go further. Need a recommendation on industrial pre-treatment for phthalates. We need the state to develop screening levels if we are going to look at compost, biosolids, etc. Again, there is a lot of data applicable to WA.</p> <p>Adenuga: Agrees with Trim. It would have been better to get some meeting materials in advance, so that AC can be more helpful. There is a lot of data out there! Very little PVC is recycled for example, and even less of that is flexible PVC. So, there is not a lot of phthalates in plastics that get recycled. Most MRFS do not want PVC, they want PE, PP because of the chlorine content.</p>

Name	Date	Method	Topic (subtopic)	Input
Multiple	October 25, 2022	Verbal	Waste Systems (composting)	<p>Schreder: To learn more about phthalates in compostable containers, do you plan to connect with certifying organizations like BPI and Cedar Grove?</p> <p>Ecology staff responded that we think we don't know enough to say how to sample and assess this risk pathway. There are other partners who would need to be involved in how to collect data to set up a study. We couldn't find robust data on risk from the compostable packaging. This work will coordinate with plastic recycling (non-compostable).</p> <p>Adenuga: But phthalates are only in PVC, those are not going to be in compostable materials.</p> <p>Ecology responded that data that we do have finds phthalates in unexpected places in food systems. So, we need to check on the waste stream to find out where phthalates are coming from.</p>
Snyder	October 25, 2022	Verbal	Waste Systems (landfills)	<p>We have discussed in this committee in the past and I don't want to lose sight of it, that solid waste management facilities are receivers not producers of phthalates. We need to move upstream. Dawn's background was good, 1799 pushes materials into composting. But we need to be able to protect our feedstocks and be proud of our products. Other comments, but I'll leave it at that and submit the other thoughts in writing.</p> <p>Ecology responded that we want to get sources controlled and it makes sense to eliminate phthalates from compost feedstocks. But we have what we have, a lot of things with phthalates that can be leaching sources over time.</p> <p>Snyder: Agree that it is a good idea to collect data. We also need to talk about what's going on and whether we let all these materials into the gate.</p>
Dunn	November 3, 2022	Verbal	Waste Systems (microplastics)	<p>Microplastics are a large source of phthalates, and the EPA put out some new studies showing contamination in the environment and food chain.</p>

Name	Date	Method	Topic (subtopic)	Input
DeCaria	November 3, 2022	Verbal	Products (medical devices)	<p>Why is PVC being targeted for reduction? This is a “Phthalates” action panel, isn’t it? Honestly asking, I just don’t understand, didn’t expect to see that in this action plan. Obviously, we’ve already identified there are different reasons to continue to use some of those materials like DEHP and at the same time we’ve also identified there are alternative materials to DEHP that can be used with PVC. So why would you just target PCV? Just doesn’t make any sense to me. So, if somebody could explain that that would be very helpful.</p> <p>Project staff responded that there are some products where other softeners that are non-DEHP can be incorporated into that PVC product. That was specifically after meetings with some hospitals where they have DEHP <i>and</i> PVC reduction goals as part of their sustainability programs. And so those may be motivated by slightly different reasons. Some of the sustainability goals around PVC have to do with waste and recycling issues, where DEHP-containing products is really motivated by a rationale around patient exposure. So, they are slightly different subcategories. Does that help?</p> <p>DeCaria: My advice is to take a deeper look at that, and we should talk offline about how those programs that you’re referring to may also lead to not only unintended consequences but also just not necessarily going to achieve the kind of sustainability you’re looking for. I can point to similar programs that are existing all over the country, all over the world, that address those issues that you’re talking about with respect to waste management and recycling of PVC medical products. I just got back from a week’s worth of meetings where that was the focus of discussion for several different large groups, and we’ve had discussions with hospital networks outside the state of WA that are very eager to do more of this with us. So, I feel like there’s another reason behind it, I’d like to exposure that deeper, and if there’s anything I can do to provide additional info. I think this recommendation is really from out of left field. I would like to see this thing explored a lot more closely before this becomes a final recommendation.</p>



Name	Date	Method	Topic (subtopic)	Input
Heine	November 3, 2022	Meeting chat	Products (medical devices)	<p>Might the two WA medical schools. WSU Elson Floyd and UW be of help with medical devices and phthalates?</p> <p>Project Staff responded that we do have a preeminent expert from UW on our committee and here today, Dr. Sathyanarayana, who has been part of this advisory committee and we are in contact and absolutely think universities are an important source of info.</p>
DeCaria	November 3, 2022	Meeting chat / verbal	Products (building materials)	<p>In chat: Your outreach resources should include the +Vantage Vinyl company verification.</p> <p>Expanded verbally: You mentioned some other sustainability-related certifications, not sure if they're quite standards because they're not necessarily consensus standards at this point. Similarly, we have this +Vantage Vinyl verification program at the Vinyl Sustainability Council. There's a set of 34 guiding principles that go along with that. I think you might find it to be enlightening in terms of how it could also be considered a sustainability program. Along the same lines, I know it's not generally what you might have been looking at before, if we're talking about the materials in question, it may be a good counterbalance to some of the other things you've seen, in terms of what other sustainability programs are out there for these materials. So, I would recommend looking, at least understand to the guiding principles that are involved. Would be happy to walk you through that, not sure if it's with Elinor or with somebody else.</p>
Sathyanarayana	November 3, 2022	Meeting chat / verbal	Products (building materials)	<p>In chat: I would suggest the Bullitt Foundation approach - they did extensive research to address how to reduce multiple chemicals in building including phthalates.</p> <p>Expanded verbally: Bullitt Foundation has a building off the grid, completely sustainable, went through a long process with a toxicologist. When I was seeing the slides, there's been a lot of progress since then. Another great resource is HBN, where you can go to their site and look at flooring, countertops, doors. I think there's a lot of great resources out there, but I was suggesting the Bullitt Foundation because they're local and you could probably talk to their toxicologist directly.</p>

Name	Date	Method	Topic (subtopic)	Input
Schreder	November 3, 2022	Verbal	Process (approach)	<p>Just want to make sure I'm understanding this correctly. Am I right in my understanding that you're basically taking a two-pronged approach: you're moving forward on several different products, under SPWA, and that includes the healthcare articles and the building products. But then to have a broader approach that considers other chemicals as well, you also have some other strategies under the healthcare articles and the building materials.</p> <p>Ecology staff responded that yes, we are trying to take this holistic approach so it does incorporate trying to address things through our existing programs, but also looking at other ways we can reduce phthalates in our environments. While we will be providing information to allow further evaluation of these products under SPWA, we're not going to necessarily be ranking these products for that in evaluation because there are a lot of other things to be considered to meet the requirement in the law under that program. So, we're going to be providing information that will allow them to evaluate those products in a more efficient way.</p> <p>Project staff added on that you'll see this later when we talk about food contact articles, we do want to move forward with work we can do that is outside of SPWA, because that program has limited resources. There's a lot we can do with voluntary actions and other approaches. Especially where we have established market movement, we can make a lot of upstream use reduction progress.</p>

Name	Date	Method	Topic (subtopic)	Input
McGrath	November 3, 2022	Meeting chat / verbal	Products (building materials)	<p>In chat: building materials - I agree with prioritizing affordable housing and encouraging consideration of material health early in the design process. A resource for product guidance to find product types that typically use safer materials is Healthy Building Network's Product Guidance. <a href="https://healthybuilding.net/products">https://healthybuilding.net/products</a></p> <p>Expanded verbally: I agree with prioritization of affordable housing if we can find affordable solution in that sector great place to start. Also, important to encourage consideration of material health <i>early</i> in design process. Once you've are at the stage of final design development, that's a bit too late to make product changes. Wanted to provide resources that Sheela mentioned to find product types that typically use those safer materials - HBN's product guidance. This is not a certification program. It's a freely available resource that anyone can use to find product types that don't require use of plasticizers like phthalates in their ingredients. We encourage people as they are considering phthalate-free options, look for entire product categories and identify product type that is typically safer from a material health perspective. See my comment in chat.</p>
Dunn	November 3, 2022	Meeting chat / verbal	Products (medical devices)	<p>Studies are showing that microplastics are pervasive in the environment and in humans and every other thing are releasing phthalates. I think this is something you should take a good look at. A piece of medical data that you may be missing is the disposal of <b>face masks</b> – by everyone, not just medical facilities. Once you get them in water, they can release phthalates according to studies.</p>

Multiple	November 3, 2022	Verbal / meeting chat	Products (Consumer products, auto products, & occupational facilities)	<p>Basically, what we want to see recommended in this report are bans on phthalates in certain products. It's great to use SPWA mechanisms but I think the recommendation should be added funding for that program, added speeding up of that program, and very specific information on what products should be prioritized. It's limited-funded, and it's got a <i>slow</i> timeframe. So, the recommendations should be a lot more directed, in terms of getting to the ability to really get the chemicals out of products. I'm also very concerned about items mentioned from before like <b>breast pumps and diapers</b>. Not only are these direct contacts but also heat is involved. It speeds up kinetics on the impacts to vulnerable people. I'd like to see those added to a pathway very directly and recommended to have funding added to this for those products specifically. Also, I didn't see autos in the slides. <b>Autos</b> need to be addressed as its own category. It's one of the most polluting things getting into stormwater and into our environment here in WA and in the world. We found <b>phthalates in brake pads</b>, so that means these are getting worn off, and contributing to a very significant pathway. I think there needs to be a recommendation specifically for this, and maybe adding this to SPWA, but not sure if it qualifies for that. Lastly, same thing for building products. We need to go beyond working with partners. We need to specify that phthalates cannot be put into products, especially product impacting indoor air, or impacting stormwater and getting out into the environment and impacting wildlife. So, I think the recommendation need to go a step further in getting a pathway towards bans.</p> <p>Tan: Agree with Heather, would like to see recommendations go towards substituting out the harmful chemicals and having safer products sooner than later, asking for more funding and support as needed. On the building products, I think it's great taking an approach to look at affordable housing, I think we should also be looking at sensitive life stages, thinking about where children and infants hang out, and maybe looking at some of the pathways or rules around schools in childcare where we could help swap out building products, or require them to. There's a lot of childcares in houses so that could be one place to start. One other question I had was around occupational exposures in building materials, I'm sure there are occupational exposures. That could also be considered an equity issue.</p>
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Name	Date	Method	Topic (subtopic)	Input
				Ecology responded the hope is that by contributing to these different standards for these state-funded projects, that we would be able to come up with ways to move away from using materials with phthalates. So, by doing that, we hope that would also help address some of those occupational exposures as well as exposures in some of the sensitive populations, like in childcare facilities.
McGrath	November 3, 2022	Meeting chat	Products (building materials)	Re: preferred purchasing - HBN can use our existing research to analyze over 200 building product types to identify those that commonly contain phthalates, can contain phthalates, or are very unlikely to use phthalates. If this is helpful, please reach out. I'd be happy to share.
Sathyanarayana	November 3, 2022	Meeting chat	Products (food packaging)	I'm sure you are following but the Food Packaging Forum has been at the forefront of this work. <a href="https://www.foodpackagingforum.org/food-packaging-health/regulation-on-food-packaging">https://www.foodpackagingforum.org/food-packaging-health/regulation-on-food-packaging</a>
Harmon	November 3, 2022	Meeting chat	Products (food packaging)	FDA staff published a good overview of where plasticizers are used in packaging and food processing materials (Carlos, et al. 2018).  Project staff responded that those were the Carlos et al. FDA papers, I think there were 3 of those in the series I have in my lit review. Those were basis I was using for recommending the kinds of equipment a technical assistance support program could use for site visits. It's great work. I'm trying to get them to have a direct meeting with me to tell me a bit more.

Name	Date	Method	Topic (subtopic)	Input
Trim	November 3, 2022	Verbal	Products (building materials, food packaging)	<p>Thanks again, two comments. 1) A bit unclear on the recommendation because it doesn't actually say it, but I think what the implication is, is that it would put requirements into preferential purchasing. That should be, in my mind, the recommendation – that there would be new requirements in the state preferential purchasing document. 2) Also [regarding the food contact articles recommendation] the idea of a task force – I do not think that's strong enough. I think the recommendation should be new <i>program</i> that would look at chemical contamination rather. All the same people could be involved, that's great. But if it's not a program, I don't think it would have any teeth or effect.</p> <p>Ecology staff responded Regarding question on purchasing, the reason it's phrased as opportunity is because there may be differences between different contracts and things and where those opportunities are and what products in those contracts, and what other options are available in those different product categories. I agree requirements would be a great way to go, I believe Leatta is on the call today, if Leatta wanted to speak to that.</p> <p>Leatta: At DES, our job is to provide goods and services, not to just agencies but to local jurisdiction, counties, cities, tribal entities, others, so we have current policies of preferences – so preferences for products that do not contain PCBs, HFCs, that do contain recycled content. We're working with groups at Ecology for the ban on polystyrene, PFAS, coming up. We're hoping to coordinate with this group on phthalates so we can be proactive instead of reactive.</p>

Name	Date	Method	Topic (subtopic)	Input
Conneely	November 3, 2022	Verbal	General Information (policy)	<p>I just want to make the point that all phthalates are not the same and they not be treated the same. On your slide the implication is that all phthalates are restricted in the EU, but I just want to point out they are not regulated the same way. There was a recent EFSA overview of 5 phthalates in food that found there was no concern for public health. Others around the world (Ireland, UK) have looked at DINP and DIDP and found that they are safe for food contact use. I don't want to lose track of what we still think is a very important point, which is that phthalates should not be lumped together, and they have not been regulated in the same way around the world.</p> <p>Project staff responded that you raised several points there, one thing here for context, if you read dietary analysis carefully, context for cumulative exposure is not really captured. We know that diet is a predominant source of exposure, but it's important to always look at all the exposures to phthalates that are happening at the same time, where people have products at home, they may be exposed at work, and diet. So that does raise a level of concern for us. We are not doing a risk assessment for this work, but we do see there are hazards, and we just need to reduce those hazards by reducing exposures. I've read the EFSA report (cited on slide), you're right they're breaking out DEHP and the anti-androgenic phthalates from the longer-chain chemicals. We are taking class approach with ortho-phthalates. Essentially, food contact article program (committee) would take a closer look at the issues that you raise – e.g. which particular materials, where do we need to prioritize for reduction in our food production facilities.</p>

Name	Date	Method	Topic (subtopic)	Input
Schreder	November 3, 2022	Verbal	Process (implementation)	<p>Appreciate you want to make sure that avoiding phthalates is incorporated in our state procurement. I was wondering if there are plans, or how you can incorporate plans, to do the same thing for all the priority chemical classes identified in the SPWA and conserve resources while you're looking at how to avoid phthalates to also look at those other chemical classes. Plan for adding them in the next round?</p> <p>Ecology staff responded that for this plan, we are making recommendations centered on looking at phthalates but like you've seen I also spoke more generally on material health. I think there are other opportunities to look at other chemicals as well. Thanks for that input.</p>
Dunn	November 3, 2022	Verbal	Products (food packaging)	<p>Currently EFSA is reevaluating phthalates in the exposure assessment of prioritized substances in dietary exposure in food contact materials. So, opinion is being reevaluated by them.</p>
Schreder	November 3, 2022	Verbal	Process	<p>Going back to prioritizing products for SPWA, I wanted to suggest that even though you're not going to have the some of the detailed chapters in this AP as we've seen in previous CAPs, you do try to collect info that will be helpful for SPWA as they're determining priority products. That's best way to make sure that program can handle as many products as possible.</p> <p>Project staff responded that captures the intent in what we do plan to include in the recommendation. So, we will try to provide as much information as possible that's helpful to SPWA when they're evaluating products. Also, if folks can set up a meeting with us to give comments in that form as well, if you're unable to make the 11/9 deadline but would like to give comments to us verbally, that might be another option.</p>
Dunn	November 3, 2022	Verbal / meeting chat	Products (consumer products, toys)	<p>I was impressed that they are looking for a way to test toys in discount stores. Most of those come from China, and China does not follow our regulations. It's been a long-term issue working with EPA through the NTTC. We've brought this up more than once. Customs has ability to identify products coming in from China, and which products they are, so you could possibly work with Customs at Port of Tacoma to identify those products so container products can be checked for phthalates, and they can be stopped before they make it into stores.</p>



Name	Date	Method	Topic (subtopic)	Input
Bloom, substitute for Tan	May 9, 2023	Verbal	Early childcare facilities	<p>With the childcare facilities, I was wondering how we will identify those, because a lot of preschools are now incorporated into regular schools. Are we working with anyone to address this?</p> <p>Project staff responded that we have a program in our group called Washington Choose Safe Places that is working with Department of Children, Youth, and Families. I believe they are working with that department to see what facilities are licensed in the State and pulling from that list. We are particularly interested in the State-supported daycares that serve communities that are low-income, tribal, or disabled and hopefully we can target those daycares in the implementation.</p>

Name	Date	Method	Topic (subtopic)	Input
Trim	May 9, 2023	Verbal	Early childcare facilities	<p>I wish the action plan had more of recommending actual actions, rather than doing studies. On the daycare items, it looks like it is primarily about flooring, but there are toys that include phthalates as well. Is there a possibility that this recommendation will be expanded to include other child products?</p> <p>Health staff responded that the first recommendation is very specific to Ecology’s product replacement program, which will work with providing resources to daycares for large, durable things, like flooring. There is some flexibility in the way we wrote the recommendation, but that specific recommendation for the product replacement program would be those larger, durable products. The other recommendations, Health and Ecology is planning on working with those facilities to swap out smaller items, like toys to switch those out. Thank you for your comment.</p> <p>Ecology staff added in that the thought there is that we already know a bit about vinyl flooring, and we know there are a lot of products available that don’t contain phthalates in that area. We thought it would be a good initial product for the product replacement program to implement first. This does not mean that it can’t be expanded to additional products.</p> <p>Health staff added in that an additional reason we wanted to start with flooring is because it can be more expensive project for some of these facilities that may need some resource and technical help to get it done.</p>

Name	Date	Method	Topic (subtopic)	Input
Sathyanarayana	May 9, 2023	Chat		<p>Seems like a lot of the recommendations will require testing. Do you have a lab that you will partner with on this?</p> <p>Project staff responded that for the solid waste pieces, they plan on having a third-party contractor do that testing and a third-party lab.</p> <p>Ecology staff added on that for some of the product testing, we have discussed with the product testing lab if that would be done internally or something we would contract out. This really depends on the timing of those tests and what their capacity is at the time. They are currently working to expand their own capacity at the time.</p> <p>Health staff added that there is a particular recommendation that Health respond to some for the recent literature that has identified phthalates in absorbent products. For that particular project, that is something that Health plans to work with a contract lab on and we are in the early stages of identifying an appropriate laboratory to carry that work. We would welcome if the committee has had experience working with analytical labs looking at phthalates in products on different materials.</p>
Bloom, substitute for Tan	May 9, 2023	Chat		<p>A lot of schools are being rebuilt, at least in Tacoma. Is this an area where Ecology can partner with the school districts for safer alternatives?</p> <p>Health staff asked are you talking here about building materials in the schools? Because in developing the building materials recommendations, we are looking at a Washington sustainable school protocol, which is a set of guidelines for greener and sustainable school facilities. We have been invited to work with the schools at the State Superintendent Office to add additional targets regarding phthalates to that work. That would then come into play for new school construction as far as Health and Ecology understands it.</p> <p>Ecology staff added on that we also have other recommendations that recommend working with Department of Commerce to try to incorporate phthalate reduction efforts and better-state standards for building products.</p>

Name	Date	Method	Topic (subtopic)	Input
Bloom, substitute for Tan	May 9, 2023	Chat	Building materials	<p>Is there any place for recommending a waiting period for off-gassing?</p> <p>Ecology staff responded that we don't believe we have anything in there that is like that, and that is an interesting idea. I am guessing you are thinking like when people purchase new goods that may contain phthalates, putting them in quarantine for some time until phthalates have off gassed. Is that the thought?</p> <p>Bloom: More so not about products, I was thinking more like from an environmental justice standpoint, like section 8 housing or school remodel. Like a period of aeration or ventilation before people move in to reduce their exposure to phthalates.</p> <p>Ecology staff responded that it is an interesting idea. I will mention there are a few references in the action plan that talk about how building materials do have different chemicals that off gas or leach out when buildings are first installed versus having been there for a while. There is a study discussed in there about phthalates specifically, but I think the main goal of these recommendations around building materials is to try to reduce the use of chemicals, specifically more phthalates.</p> <p>Health staff added thank you for that comment and one of the things we are always open to, if you have resources that you think would provide context for your comments and help us address them better in the updates, we will welcome that kind of input.</p>
Sathyanarayana	May 9, 2023	Chat	General	<p>Congratulations on putting this together! Very ambitious, and I'm looking forward to seeing how it will be implemented.</p>

<p>Bloom, substitute for Tan</p>	<p>May 9, 2023</p>	<p>Verbal</p>	<p>General, implementation of AP.</p>	<p>I am not clear on how this looks upstream. Are there any people assigned to this action plan to bring it to the state committee on the environment, congress men, or anyone interested on the upstream end?</p> <p>Ecology staff responded that we are not aware of official upstream actions. Because of the way it is written, it does include recommendations for Safer Products for Washington to address certain products and that program reports to the legislature on our priority chemicals, products, and regulatory determinations. This is also an agency action plan and is multi-media. It is used by various programs and there may be outreach on that end. This is an action plan and is a little different from a chemical action plan, but I would expect it has the same type of review. As we work on developing implementation plans for this, in addition to implementation plans for our chemical action plan work, this will be part of that que. As different projects are evaluated, we discuss those with the public, so we will reach out in that way. Industry is also very involved in that. Also, because these are new projects, we may request funding, which is a reach out to the legislature or to grants.</p> <p>Health staff added that within the food contact articles piece, the FDA has federal authority over phthalate concentration over food contact articles. We have proposed to continue to track that process wit the FDA. They made some decision in May 2022 to remove authorization for some of the phthalates and they have opened a date gathering period to access the safety of phthalates in food contact articles. In our recommendation for food contact, we are proposing a workgroup at the state agency level would track and comment to FDA as appropriate, so it is an engagement with the federal process. Currently, we don't imagine a legislative role with that.</p> <p>Ecology staff added that the Hazardous Waste and Toxics Reduction program does have a legislative liaison that works closely with the legislature and in the past has used our chemical action plans as reference when there is interest in a policy action that connects. I anticipate that this document will serve as a similar resource for the legislature on policy options for improving the space around phthalates.</p>
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Name	Date	Method	Topic (subtopic)	Input
Bloom, substitute for Tan	May 9, 2023	Verbal	Early childcare facilities, food packaging	<p>With the early childcare facilities and food packaging, are there any recommendations in place for looking at phthalates in food packaging that kids are getting at these early childcare facilities?</p> <p>Health staff responded that that is an interesting question, because it does bring our recommendations together of food contact articles and childcare facilities. It is interesting to see how some of these recommendation topics overlap with one another and that is going to be something that we address in the implementation phase. In the food recommendations section, we cited some references about ultra-processed food and epidemiology studies that reference a diet in ultra-processed food has been associated with higher-phthalate body burdens. I think that is something that Department of Health, when working on materials for those daycares, can include. Thank you for your comment.</p>

Name	Date	Method	Topic (subtopic)	Input
Evans	May 9, 2023	Verbal	General, consumer products	<p>I see in the action plan there is mention of EPA’s review under Toxics Substances Control Act (TSCA) of seven phthalates, so I am wondering if there is a recommendation to engage in that process. I heard that there is a recommendation about engagement in FDA’s process, but what do folks think about a recommendation to engage in EPA’s process for the seven phthalates under TSCA?</p> <p>Project staff responded we are not directly involved with speaking to the EPA about that, but believe another toxicologist not in the meeting today, is more engaged in the TSCA process. That is something Ecology is monitoring, and we don’t know if there is a plan to make a comment on that. We are interested in keeping tabs on the EPA and their work on specific phthalates, like DINP, where they just did the scope of their risk evaluation and the cumulative impacts piece. Both of those things we are monitoring, but we can’t speak to our personal engagement with that, because someone else in our program is working on that.</p> <p>Evans: I think that I will plan to submit a comment on that.</p> <p>Health staff added that we are tracking the TSCA process closely. The risk evaluation for the individual phthalates and this week is the science advisory meetings for the cumulative risk assessment proposal for phthalates. A colleague is on the panel that is looking at the cumulative risk assessment and we are certainly tracking. We did not plan formal comment, right now EPA only released a formal scope, so there isn’t a risk evaluation to comment on.</p>