Overview

On November 4 and November 15, 2021, the Washington State Departments of Ecology and Health hosted webinars to introduce the Phthalates Action Plan (AP) project.[1] Following the presentation, Ecology and Health conducted a series of polls and took questions and input from stakeholders and the public.

See below for the following information:

1. Webinar presentation materials.
2. Webinar topics outline.
3. Poll questions and responses.
4. Public questions and answers.
5. Lists of attendees.

Webinar presentation materials

The presentation slides[2] are available on the Phthalates Action Plan project webpage.[3]

Webinar topics outline

The presentation covered the following topics:

- Introductions.
  - Emily Celto introduced agency staff participating in the presentation.
  - We also recognized Ken Zarker, Ecology. Ken was a state and national leader in toxics reduction efforts. He spearheaded projects such as this one, which bring together stakeholder groups to partner and carry out innovative toxics reduction strategies.
- Puget Sound Partnership Near Term Action Grant 2018-0465.
  - Irina Makarow, Ecology, recapped how the project originated, with funding from the Puget Sound Partnership.
  - The project will follow the process described in WAC 173-333 to prepare an action plan and develop recommendations to reduce exposures. We will convene a variety of stakeholders. Work under the grant has to be completed by the end of 2023.
- The "Phthalates" Action Plan.
  - The plan will look at phthalates throughout Washington state, not just Puget Sound.

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[1] 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.

[2] https://www.ezview.wa.gov/Portals/_1962/Documents/Phthalates/PhthalatesActionPlan_IntroductionInputSession_Nov2021.pdf

[3] https://bit.ly/phthalates-AP

  - We will form and consult with an advisory committee with representatives from local governments, tribal organizations, industry, health and environmental advocacy groups, and academia.
  - The recommendations we will develop can cover an array of actions.
  - We will seek public comment on a draft of the action plan and we'll consider those comments when preparing the final plan.
- What will be different?
  - We will approach two aspects of the plan differently.
  - We will focus early on recommendations for action.
  - Our goal is to facilitate public participation by writing a more accessible plan and expanding outreach to overburdened communities.
- Plan development timeline.
  - The project will develop in three main phases:
    - Convening the advisory committee during the first quarter of 2022 to scope the plan.
    - Drafting the plan in 2022.
    - Issuing the draft plan for comment in early 2023, reviewing comments, and preparing the final plan by the end of 2023.
- Why Phthalates?
  - Sascha Stump, Ecology, provided an overview of what phthalates are, how they are used, and their potential environmental impacts.
  - They are produced in high volume and are widely used, especially in consumer products.
  - They can readily release from products they are used in, leading to exposure in humans and the environment. Phthalates are detected in air, water, and soil samples. Phthalates and their metabolites are detected in the majority of humans.
  - Their interference with endocrine systems and disruption of normal hormone regulation is important in terms of potential effects on wildlife and ecosystems.
  - Though not highly persistent in the environment, they are often thought of as pseudo-persistent or continually persistent chemicals due to their high release into the environment. Studies suggest continual release and environmental recontamination.
- What are phthalates (i.e., ortho-phthalates)?
  - Ortho-phthalates are a class of chemicals, not an individual chemical of concern. There are over 25 different phthalate chemicals that have been used in commercial applications. They are generally used as solvents or as plasticizers—uses typically involve mixtures of multiple phthalates.
  - Phthalates used as solvents are often more volatile, meaning they have higher concentrations in the air. Phthalates used as plasticizers in products to soften and add flexibility to plastics are often less volatile and less water soluble, but can still adsorb on particles and contaminate soils and sediments.
- How are phthalates used?

  - Children's toys, vinyl flooring, and personal care products have been the focus of past actions.
  - The Food and Drug Administration regulates their use in food contact materials.
  - In 2006, global production was about 4.7 million metric tons, increasing to 8 million metric tons (17.6 billion pounds) in 2015.
  - Because they don't form strong chemical bounds with products they are used in, phthalates can migrate out of products and into the surrounding environment.
- Previous actions.
  - Previous Washington state regulatory actions include:
    - Six phthalates in children's products are restricted, and 13 must be reported under the Children's Safe Product Act.
    - The Pollution Prevention for Healthy People and Puget Sound Act listed phthalates as a priority chemical class in 2019. Ecology identified vinyl flooring and personal care and beauty products containing phthalates as priority products, and is considering regulatory actions under that law.
    - Water quality standards are set for six specific phthalates.
  - Federal regulatory actions include:
    - Some phthalates are regulated federally under the Consumer Product Safety Improvement Act, focusing on children's products.
    - EPA has authority under the Toxic Substances Control Act.
    - The FDA has some limited regulations and allowances for phthalates in products such as pharmaceuticals and food packaging.
  - Other states and countries regulate specific phthalates, including the European Union's REACH program.
- Environmental pathways.
  - Phthalates can enter the environment via point source air emissions from industrial facilities; off-gassing from products that contain phthalates; stormwater through dust particles that have adsorbed phthalates from the air or contact with materials used outdoors; and in wastewater resulting from use of consumer products.
  - Phthalates that enter the environment through water and air are not especially water soluble and partition to sediments.
  - Sediments and soils can also be contaminated through atmospheric deposition.
- Examples of previous Puget Sound studies.
  - Data has been collected on phthalates in the environment throughout the state over the past few decades. A subset of these previous studies have been conducted around Puget Sound.
  - The 2011 Puget Sound Toxics Loading study estimated the release of phthalates into Puget Sound at 34 metric tons (about 75,000 pounds) per year.
  - Phthalates are detected in surface water, sediment, and in aquatic species both in marine and freshwater environments.
- Sediment sampling.

    - The grant is funding marine sediment testing, including sampling in several sites around Puget Sound and in Elliott Bay in 2021. We will report the analysis results as part of the action plan.
- Environmental impacts.
    - Certain phthalates are toxic to aquatic organisms, especially those that live in or near sediments. Phthalates also act as endocrine disruptors.
- Environmental questions.
    - The plan can address a series of questions surrounding phthalates:
        - What pollution prevention actions can we recommend?
        - Can we identify the most actionable sources?
        - Are any particular organisms or ecosystems in Washington especially sensitive or disproportionately impacted by phthalates, and what actions can we take to protect them?
        - Are monitoring efforts in the state sufficient? Can they be more effective?
        - Can we improve coordination between state agencies?
- Human health effects of phthalates.
    - Elinor Fanning, Health, provided an overview of the health effects associated with phthalates, and how we are exposed to phthalates. Exposure has been reported in people, as well as in laboratory animal studies.
        - The class of ortho-phthalates shows endocrine disruption effects:
            - Disruption of normal hormonal processes, resulting in toxicity to male and female reproductive systems at various life stages.
            - Effects on allergic response.
            - Obesity and the metabolic system.
            - Alterations in the developing brain.
        - Some phthalates have been associated with cancer in laboratory animals.
- Populations of concern.
    - These include pregnant people, children, people exposed at work, and persons experiencing certain medical exposures.
    - Certain windows of time during development and reproduction are especially hormone-dependent and therefore prone to endocrine disruption.
- Phthalates in our bodies.
    - Not all effects are happening in all people who are exposed to phthalates, but exposure is very widespread. Phthalates are found in the urine of over 90% of Americans.
    - Phthalates can distribute to various body tissues and can cross the placental barrier during pregnancy to expose the developing fetus.
- How are people exposed to phthalates?
    - Oral, inhalation, dermal, and healthcare setting exposures are the most important.
- Oral exposure.

    - Dietary intake dominates people's phthalate exposure, via food and beverages vulnerable to contamination at many stages of the food supply system.
    - Children can ingest dust containing phthalates and can mouth phthalate-containing plastics.
- Inhalation exposure.
    - People can inhale phthalates released to air from plastic consumer products such as automotive interiors, plastic housewares and furnishings, and those present in perfumes, air fresheners, and scented cleaning products.
    - People can also inhale phthalate contaminated dust particles.
    - Work environments such as plastic manufacturing or retail sales of phthalate-containing consumer products are a possible source of occupational exposure.
- Dermal exposure.
    - Some phthalates can cross through skin and distribute to other body tissues.
    - Exposure sources include personal care products and cosmetics people apply to the skin (such as perfumes, lotion, lip balm, and similar products), fragranced cleaning products, and vinyl gloves.
- Exposure in health care settings.
    - Federal law allows the use of phthalates in medical supplies and devices in order to confer important functional characteristics, like softness and flexibility. These products can be a source of phthalate exposure. Medical exposures could be high for certain subpopulations of people.
    - Many health care organizations are adopting phthalate-free medical supplies and devices.
- Questions about exposure to people.
    - Which sources of exposure are the most important? How do those key sources change for different groups of people? Are some people more vulnerable?
- Improving outreach and input.
    - Lauren Tamboer, Ecology, introduced our interest in a stronger emphasis on how we involve the public and community groups in the planning process.
- Stakeholder input and community outreach.
    - We will be working with the advisory committee to scope the action plan. They'll also contribute to our work and decision-making throughout the process.
    - This plan is part of a broader public outreach effort from our program that works to give the public the tools to protect themselves from exposure to toxic chemicals and purchase safer products.
    - Our goal is to focus such outreach especially for communities who are disproportionately exposed to toxic chemicals, and the community organizations that support their well-being.
    - We want to structure our process in a way that facilitates sharing of expertise by a variety of stakeholders.
    - We asked the audience to answer four poll questions.

Poll questions and responses

During each of the webinars, we asked participants a series of four questions about their webinar participation preferences. A summary of the responses to those questions is below.

Poll Question 1: Which stakeholder group do you represent?

We'll use this information to identify the gaps in our current representation, and reach out to specific stakeholder groups and invite them to participate if they have capacity and interest.

Table 1. Poll Question 1 responses from Nov. 4 and Nov. 15, 2021.

Poll Question 1 response	Number of responses Nov. 4	Number of responses Nov. 15
Myself – the public!	1	1
Environmental or public health advocacy organization	2	2
Community-based organization	0	0
Local, state, federal, or tribal government	6	4
Other non-profit organization	0	0
Manufacturer	4	1
Retailer or distributor	0	0
Industry organization	5	3
Academia	0	0
Other	1*	0
No answer	15	15
Total respondents	34	26

Note: * indicates no additional details were provided.

Poll Question 2: What type of meeting length and focus do you prefer?

We'll use this information to structure our input sessions in 2022.

Table 2. Poll Question 2 responses from Nov. 4 and Nov. 15, 2021.

Poll Question 2 response	Number of responses Nov. 4	Number of responses Nov. 15
Shorter (1 hour) focused input sessions on specific topics (more sessions overall)	14	6
Longer (2 to 3 hour) input sessions covering multiple topics (fewer sessions overall)	2	7
I prefer to weigh in via written feedback and comments	2	1
I have something else to propose	0	0
No answer	16	12
Total respondents	34	26

Poll Question 3: How should we structure the discussions in our future sessions?

We'll use this information to plan our discussions with stakeholders and the public during our 2022 input sessions.

Table 3. Poll Question 3 responses from Nov. 4 and Nov. 15, 2021.

Poll Question 3 response	Number of responses Nov. 4	Number of responses Nov. 15
Breakout rooms (small group discussions)	3	1
Full group discussions	12	5
Polling (like this one!)	0	6
Another idea	0	0
No answer	16	14
Total respondents	31	26

Poll Question 4: What format do you prefer to learn new information about phthalates or the phthalates action plan? (Check all that apply!)

We'll use this information to prioritize and inform the types of outreach materials we create.

Table 4. Poll Question 4 responses from Nov. 4 and Nov. 15, 2021.

Poll Question 4 response	Number of responses Nov. 4	Number of responses Nov. 15
Email list updates	12	11
Infographics	4	7
Videos	5	7
Websites	8	8
Social media	2	2
Focus sheets	8	9
Interactive sessions/webinars	12	10
In-person events	1	3
Another idea	0	2*
No answer	14	12
Total respondents	30	26

Note: * indicates no additional details were provided.

Public questions and answers

We are at the beginning of the process, and we recognize there are questions we aren't able to answer yet. We will consult with the advisory committee and stakeholders on both the plan content and the best outreach opportunities we can provide.

November 4, 2021

Q: Wouldn't product labeling help inform everyone? Why has industry not done so?

> **A:** Product labelling is typically regulated at the federal level. We can look at opportunities that might be available to require labeling at the state level.

Q: Can you please do a very thorough look at the disproportionate burden of impacts of products (i.e., environmental justice)?

> **A:** We intend to consider disproportionate impacts, especially to overburdened populations.

Q: Centers for Disease Control (CDC)'s National Health and Nutrition Examination Survey (NHANES) database tracks chemical exposures by race now, so that information is available for the U.S. population.

> **A:** Yes, thank you for mentioning that. We are aware of the data from this research and our team reviewed it.

Q: Were there any other agencies or states that applied and were funded with this funding source?

> **A:** This is federal funding which is disbursed by the U.S. Environmental Protection Agency to the Puget Sound Partnership. Many types of organizations can (and do) apply for funding, including research institutions, local and state governments, Tribes, and non-governmental organizations.

Q: Consumer Product Safety Commission (CPSC) has done a deep dive of exposure and exposure sources for phthalates. Data is available on their website. Exposure routes depend on molecular weight.

> **A:** We are considering the entire class of phthalates for this action plan, but we are aware of past work by CPSC. We will continue to review it as we develop the action plan. Thank you for your input on this, we appreciate the feedback.

Q: Will bioaccumulation and magnification in aquatic species (fish, shellfish) be considered—especially to address disproportionate impacts on communities that rely on these sources, especially tribal communities?

> **A:** We do want to consider the presence of phthalates in aquatic species and the impact on communities who rely on these species for subsistence.

November 15, 2021

Q: Will ortho-phthalates be differentiated between for the action plan?

A: For this action plan, we are considering the entire class of ortho-phthalates. Although there are some differences between different phthalates, most have associated hazards or data gaps. For that reason, we do not see any toxicological reason to separate them and will consider the entire class as a whole. We do appreciate your feedback on this and any information you can share that could inform recommendations for the action plan as it develops.

Q: Do you have information on phthalates in dust in occupational settings, especially solid waste facilities?

A: We do not currently have any specific information on this. We appreciate you voicing this concern, however, and we will follow up on it as we scope the action plan.

Q: Many phthalates are used in mixtures. Will you consider this in terms of exposures and impacts?

A: Yes, we do plan to consider mixtures since we know phthalates can be used in mixtures—human and environmental exposures are complex and can be comprised of multiple phthalates in addition to other endocrine active chemicals.

Q: Is there data on which environmental pathway (air, water, sediment) is contributing the most to phthalates in the environment?

A: We are in early stages and still gathering this type of information so I do not have information on the relative impact of these different pathways to share at this time. This is one of the questions we want to explore as we develop the action plan, because we do know these pathways are all interconnected. A 2007 sediment workgroup study on phthalates summarized the air-stormwater-sediment pathway as an important route. The study described the process of phthalates off-gassing from products into the air, adsorption of phthalates from the air on particulates, and weather events causing those particulates to wash into waterways and contaminate sediments.

Q: Given EPA's recent announcement on phthalates, their phthalates CAP, and Ecology's previous efforts, why is this CAP necessary and how do we intend to not duplicate efforts?

A: Think of the Chemical Action Plan (CAP) as the big picture view that reviews and encompasses all the efforts Ecology and Health are undertaking related to a specific chemical class. So the work we're doing under Safer Products for Washington to reduce phthalates in consumer products would be considered one pathway for implementing the goals and recommendations of the action plan. We closely review EPA's activities related to the chemical classes we're assessing to ensure we either coordinate with those efforts, or clearly communicate in instances where we cannot coordinate with federal efforts.

Q: What was the basis for selection of the marine sediment monitoring locations shown in the map in the presentation?

A: Sediment samples were collected at existing locations that are being monitored on a regular basis by Ecology. We are happy to connect with you and provide additional information if helpful.

Q: Is the PBT process available on the Ecology website? (What is the process, criteria, and how is it conducted?)

A: This action plan has a different name—compared to a chemical action plan—because it relies on a different funding source (a National Estuary Program grant versus legislative funding). That said, because of the success we've had using the PBT process for past chemical action plans, we intend to continue using that approach for this action plan to address phthalates. The PBT process[4] outlines plan development steps, and is available on the Legislature's website.

Q: Appreciate the effort to streamline CAP process, there is a lot of research coming out on phthalates (e.g., impacts on female reproduction)—encourage ECY and DOH to work with technical experts to get the science right while utilizing information to do targeted outreach with communities and disproportionately impacted groups.

A: Thank you! That's helpful feedback to hear.

Webinar attendees

November 4, 2021: Agency project staff

Table 5. Department of Ecology and Department of Health project staff who supported the Nov. 4 input session.

Name	Organization
Emily Celto	Department of Ecology
Elinor Fanning	Department of Health
Irina Makarow	Department of Ecology
Cheryl Niemi	Department of Ecology
Lenford O'Garro	Department of Health
Marissa Smith	Department of Ecology
Sascha Stump	Department of Ecology
Lauren Tamboer	Department of Ecology

November 4, 2021: Attendees

Table 6. Stakeholders and public representatives who attended the Nov. 4 input session.

Name	Organization (if provided)
David Adenuga	Exxon Mobil
Troy Baker	National Oceanic and Atmospheric Administration
Lori Blair	Boeing

[4] https://apps.leg.wa.gov/wac/default.aspx?cite=173-333

Name	Organization (if provided)
Frances Bothfeld	Department of Ecology
Arielle Brown	American Cleaning Institute
Stacey Callaway	Department of Ecology
Alexis Carson	Department of Health
Ray Colby	Makah Tribe
Eileen Conneely	American Chemistry Council
Gary Garrety	Department of Health
Kimberly Goetz	Department of Ecology
Michael Krugman	Estee Lauder
Carolyn Kupper	Boeing
Samantha Louderback	Washington Hospitality Association
Nate Lubliner	Department of Ecology
Elizabeth Miller	Makah Tribe
Thomas Myers	Personal Care Council
Vonne Nye	Stellantis
S. S.	Department of Ecology
Luke Scarano	American Chemistry Council
Rani Senkbeil	Jacobs
Tim Shestek	American Chemistry Council
Art Starry	Thurston County
John Stuart	
Samantha Summers	Albertsons
Heather Trim	Zero Waste Washington
Ashley Whitley	

November 15, 2021: Agency project staff

Table 7. Department of Ecology and Department of Health project staff who supported the Nov. 15 input session.

Name	Organization
Elinor Fanning	Department of Health
Irina Makarow	Department of Ecology
Cheryl Niemi	Department of Ecology
Lenford O'Garro	Department of Health
Sascha Stump	Department of Ecology
Lauren Tamboer	Department of Ecology

November 15, 2021: Attendees

Table 8. Stakeholders and public representatives who attended the Nov. 15 input session.

Name	Organization (if provided)
Carrie Brown	Household & Consumer Products Association

Name	Organization (if provided)
Evan Bruning	Serlin Haley
Stacey Callaway	Department of Ecology
Andy Coenen	ERM
Holly Davies	Department of Health
Justin Donahue	Department of Ecology
Ashley Evans	
Christopher Finarelli	Household & Consumer Products Association
Kimberly Goetz	Department of Ecology
Emma Gossard	Department of Health
Patrick Harmon	BASF
Kevin Heffern	ERM
Thomas Hmiel	TEKNOR APEX
Tylar Holden	ERM
Erika Kinno	King County
Amy Lee	J. Crew
Robert Mott	Mott Consulting
Grant Nelson	True North Public Affairs
Rory O'Rourke	King County
Carol Patterson	Food Service Packaging Institute
Shirlee Tan	King County
Heather Trim	Zero Waste Washington
Lanita Walker	City of Tallahassee
Ashley Whitley	
Felicia Williamson	State of Minnesota
Call-in User_1	
Call-in User_2	
Call-in User_3	