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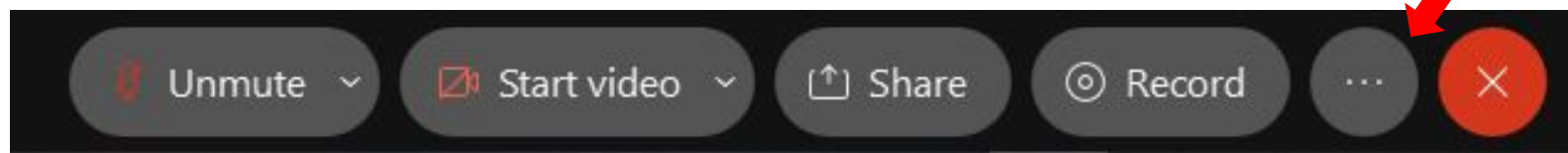
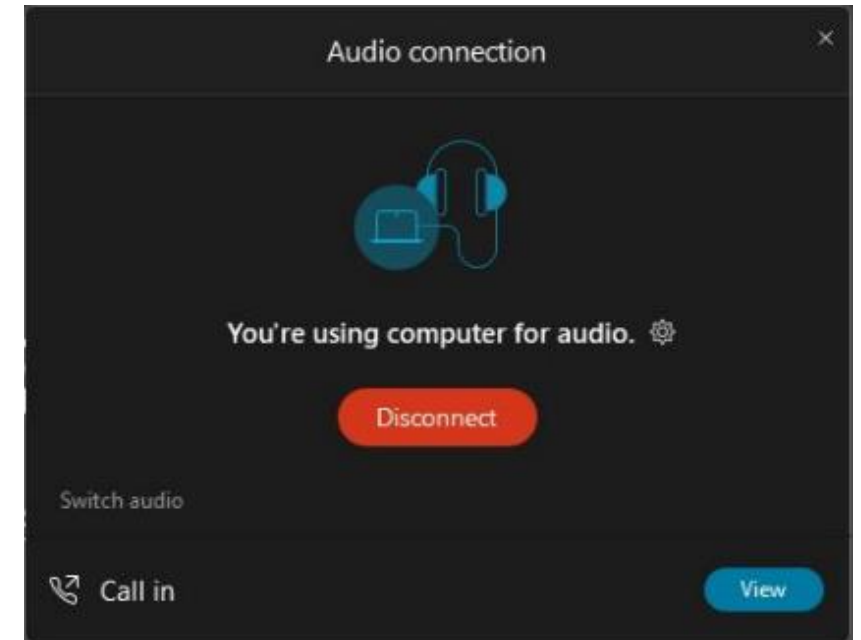
Phthalates Action Plan: An Introduction

November 4 and 15, 2021



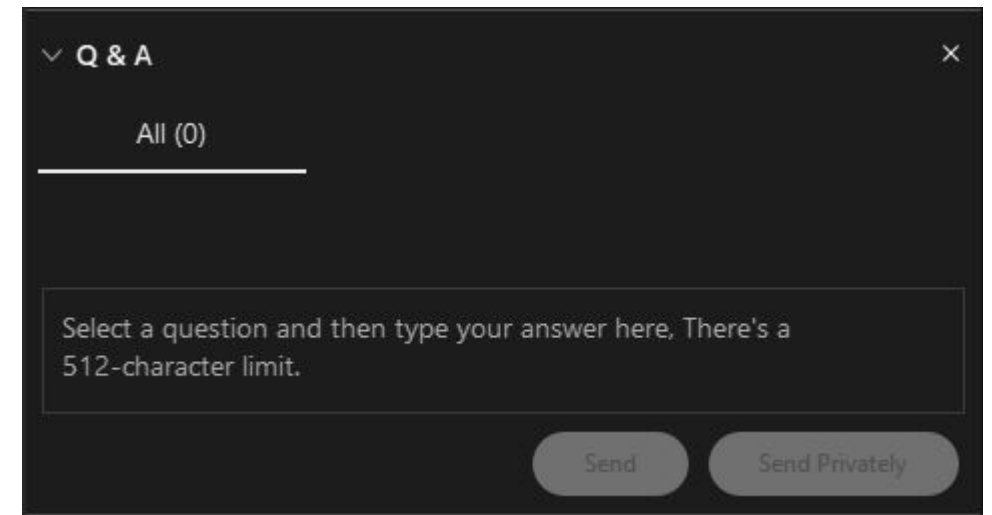
Audio connection logistics

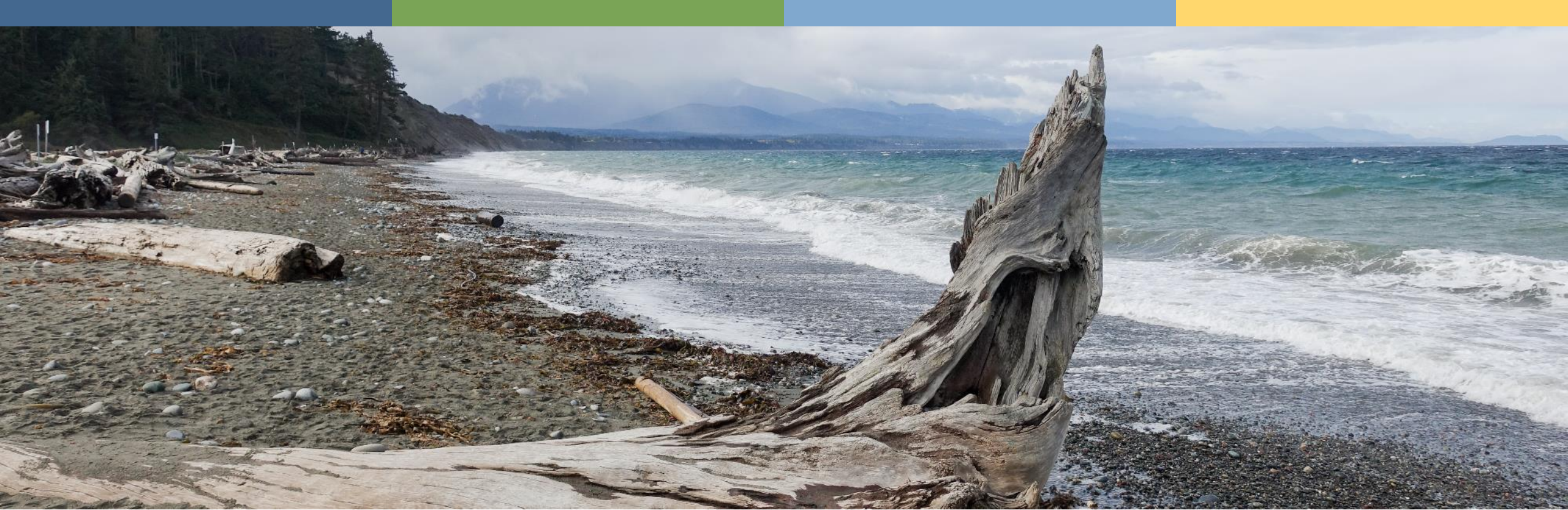
- For audio connection, we recommend using your computer speaker.
- If you are unable to join using computer audio, use “Call in” to access dial-in information.
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Webinar logistics

- All lines are muted
- Questions and input go into the Q&A box
 - Ask anytime, we will address at the end.
- Technical difficulty issues go in the chat box.
- To open the chat box, select the chat button at the lower right hand side of the your screen.
- In the event of major technical difficulties, we will reschedule the webinar.





Phthalates Action Plan: An Introduction

November 15, 2021 (12:30 pm PT)



Today's agenda

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 presentation 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.

- 1 Team introduction
- 2 About the Phthalates Action Plan project
- 3 Why phthalates
- 4 Outreach & engagement
- 5 Q & A
- 6 Contact information



Section 1

Team introduction

Project team (*presenting today)

- From Ecology

- Emily Celto*
- Irina Makarow*
- Cheryl Niemi
- Marissa Smith
- Sascha Stump*
- Lauren Tamboer*

- From Health

- Elinor Fanning*
- Lenford O'Garro

Recognition



Kenneth Zarker | 1959 – 2021



Section 2

About the Phthalates Action Plan project

Puget Sound Partnership

Near Term Action Grant 2018-0465

- Project goals
 - Consider the impacts of endocrine disrupting chemicals
 - Prepare an Action Plan
 - Develop recommendations to reduce exposure
 - Follow Persistent Bioaccumulative Toxics Rule (WAC 173-333) process
 - Convene and work with a variety of stakeholders
- Complete all work by December 2023

The “Phthalates” Action Plan

- Focusing on phthalates
- Following the “Action Plan” process
 - “Big picture” statewide view
 - Form & consult with an Advisory Committee
 - Identify an array of non-binding actions
 - Include stakeholder & public outreach
 - Public review of a draft action plan

What will be different?

- We know more from the start
 - What these chemicals are
 - Products they are found in
 - Exposure pathways
 - Where they're found in the environment
- Create a more accessible plan
 - Avoid repeating technical information
 - Concise, publicly accessible writing
- Expand outreach to overburdened communities

Focus on
recommendations for
action

Facilitate public
participation &
learning

Plan development timeline





Section 3

Why we're focusing on phthalates

Why phthalates?

- **High production volume, diverse applications**
- **Release readily** from source products
- **Widespread** presence in environmental media, despite low persistence.
- **Found in most humans** urine samples
- **Target endocrine-sensitive processes** (hormone regulation)
- **Pseudopersistence = continuous release**

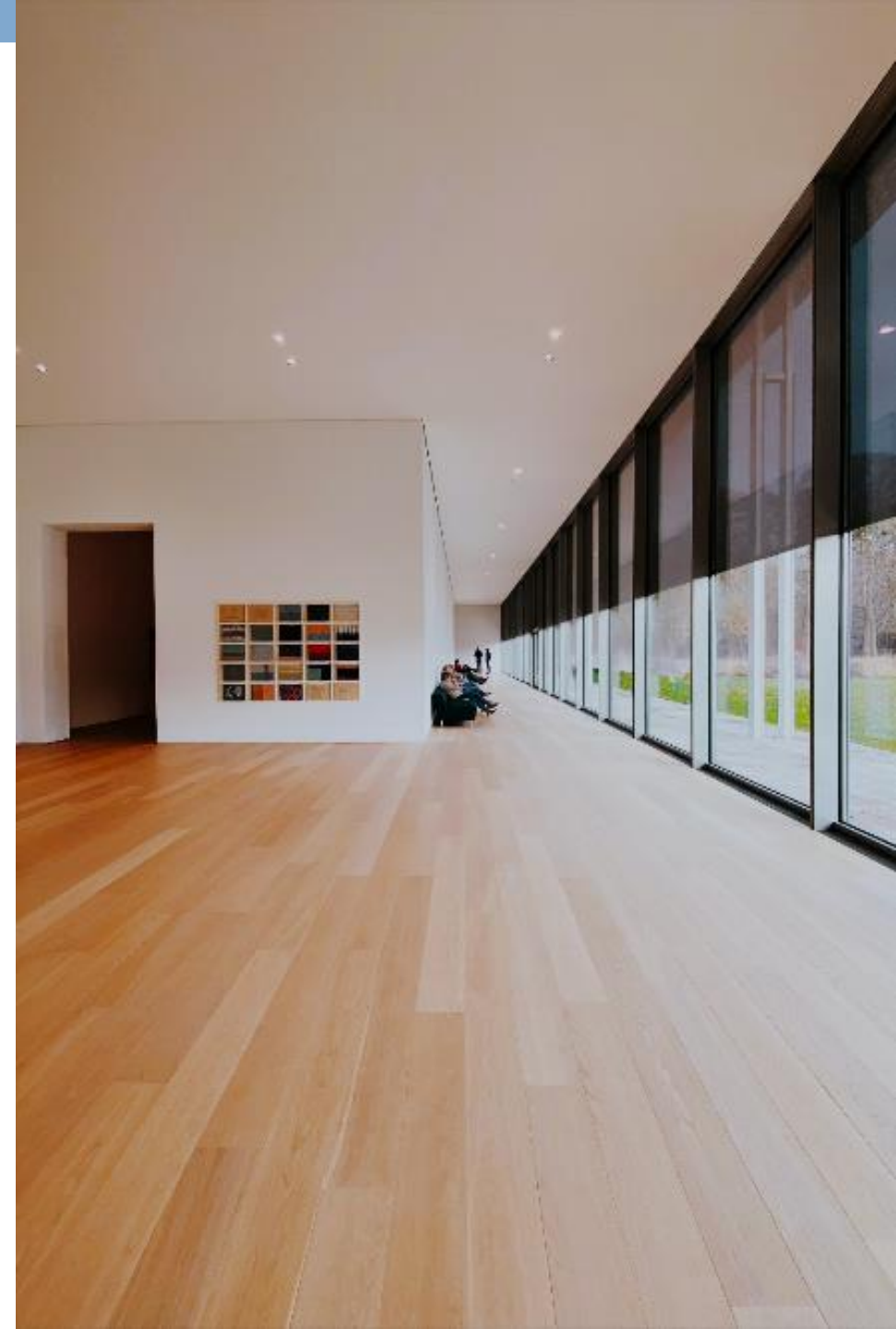
These factors have led to **growing public concern** about phthalates

What are phthalates? (i.e., orthophthalates)

- **Class of chemicals**
- Phthalates used as **solvents**
 - More volatile (higher concentrations in air)
- Phthalates used as **plasticizers**
 - Adsorb on particles (house dust)
 - Contaminate sediment
- **Not strict categories**—considerable overlap in properties and toxicity and also used in mixtures

How are phthalates used?

- Plasticizers
 - Toys, flooring, sports equipment, electronics, automotive interiors, roofing, building products, medical uses, food contact materials
- Solvents
 - Personal care products, fragrances, adhesives, industrial uses
- Annual global production (Wang, 2019)
 - About 8 million metric tons in 2015
 - **17.6 billion pounds per year**



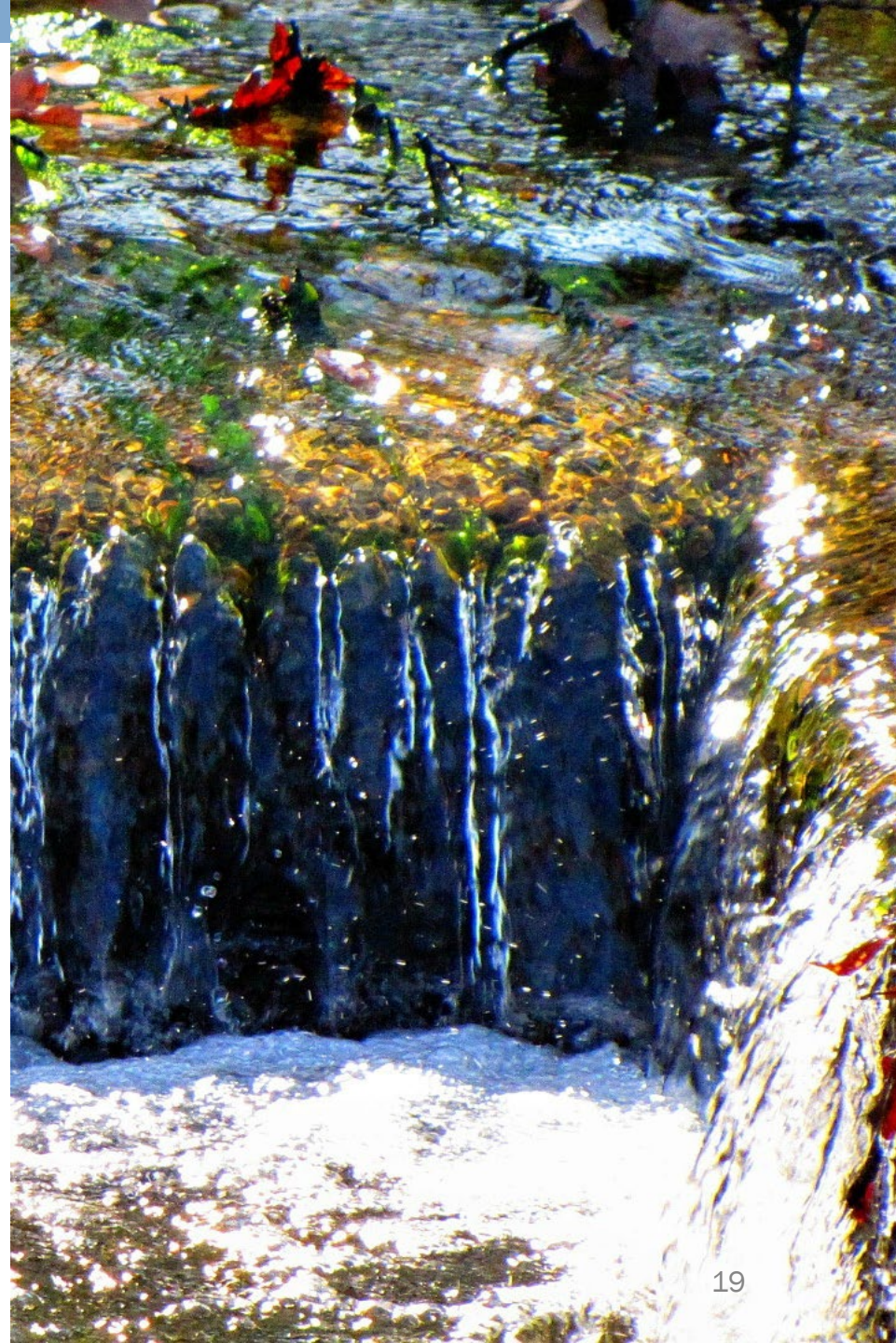
Previous actions

- Washington state
 - Children's Safe Product Act (CSPA)
 - Pollution Prevention for Healthy People and Puget Sound Act (Safer Products for Washington)
 - Water quality standards
- U.S. Federal
 - Consumer Product Safety Improvement Act (CPSIA)
 - Toxic Substances Control Act
 - Food and Drug Administration
- Other states, nations
 - European Union - REACH

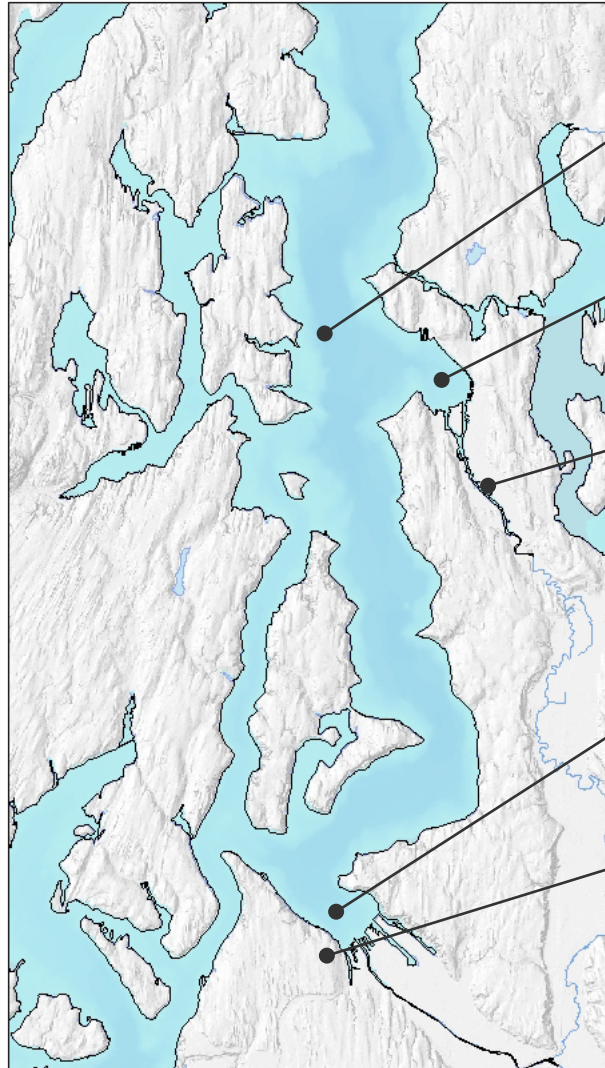


Environmental pathways

- Air
 - Point source emissions
 - Off-gassing
- Water
 - Stormwater
 - Waste water
- Sediment
 - Atmospheric deposition
- Others?



Examples of previous Puget Sound studies



Puget Sound (Ecology, 2011)

Estimated release 34 metric tons/year

Duwamish Estuary (King County, 2018)

Sediment, juvenile Chinook salmon exposure

Lower Duwamish Waterway (LDWG, 2010)

Surface water, surface sediment, fish, invertebrates

Commencement Bay (Ecology, 2010)

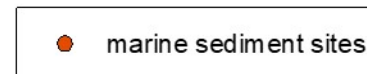
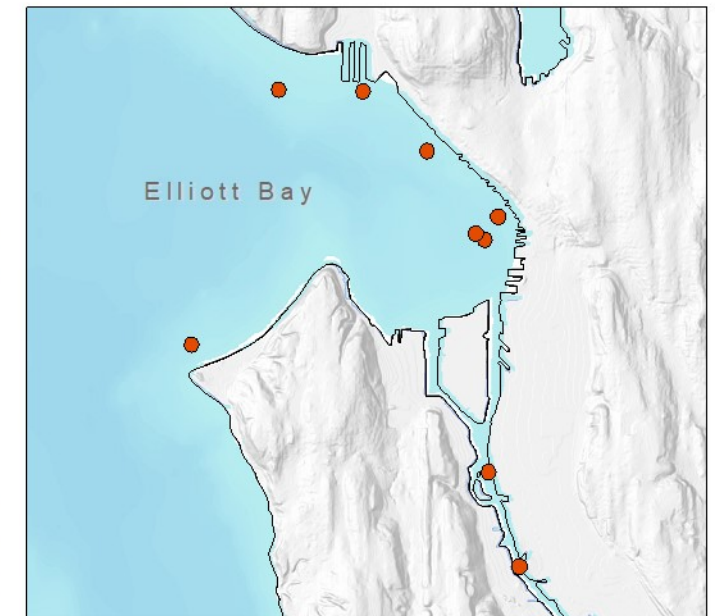
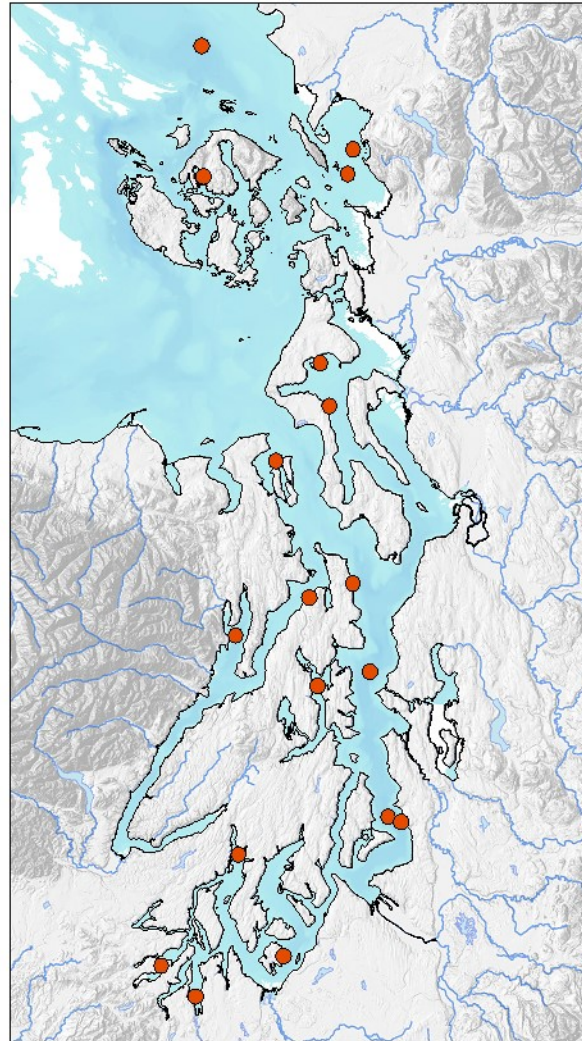
Sediment

City of Tacoma Stormwater (City of Tacoma, 2017)

Stormwater sediment traps

Sediment sampling

- Grant will fund marine sediment sampling:
 - 20 – Puget Sound
 - 10 – Elliott Bay
 - Collected in April – June 2021
 - Reported in the Action Plan



Environmental impacts

- **Pseudo-persistence**
 - High production and release volume
- Aquatic toxicity
 - Benthic organisms (sediment zone)
- Endocrine disruption
 - Oestrogenic in fish, amphibian species (feminization)
 - Alter steroid synthesis in fish
- Uptake in plants
- Biodiversity

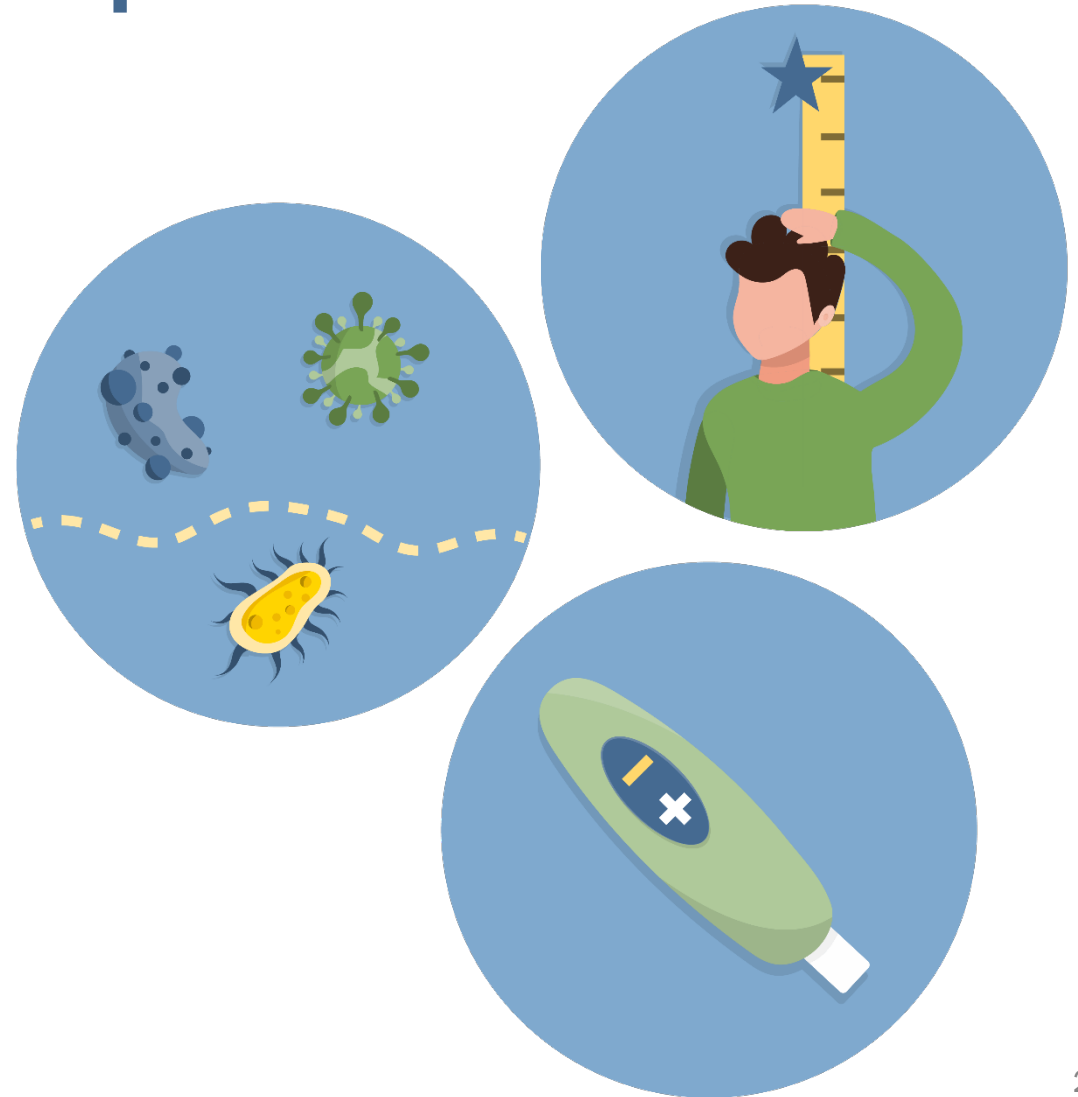


Environmental questions

- What actions can we recommend to reduce environmental contamination?
- Can we identify organisms or ecosystems impacted by phthalates?
- Can we recommend ways to improve current monitoring efforts?
- Can we facilitate coordination between agencies and organizations?
- **What are your questions and concerns?**
- **How do you prefer us to engage with you?**

Human health effects of phthalates

- Endocrine disruption
- Reproductive toxicity
- Developmental toxicity
- Allergic/immune responses
- Obesity/diabetes
- All-cause mortality
- Cancer



Populations of concern

- Pregnancy
- Children
- People exposed at work
- People exposed during health care



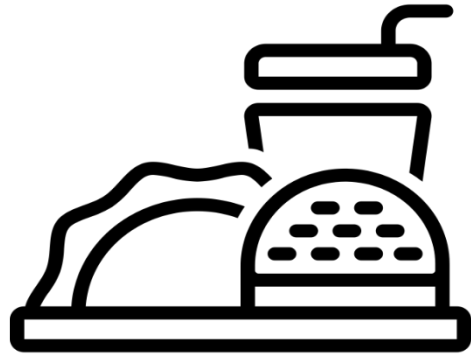
Phthalates in our bodies

- Over 90% of urinary samples from U.S. residents contain products of phthalates
- Other body fluids where phthalates have been found:
 - Blood
 - Semen
 - Breastmilk
 - Umbilical cord blood
 - Amniotic fluid



How are people exposed to phthalates?

Oral exposure



Inhalation

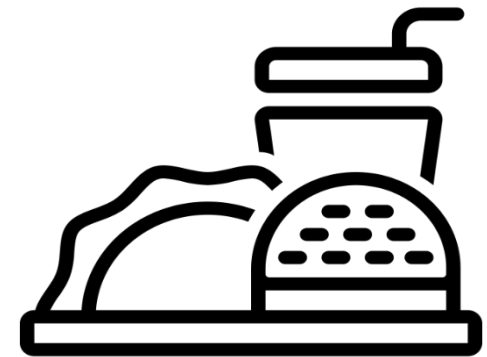
Dermal exposure



Health care exposure

Oral exposure

- Foods
- Food contact materials
- Beverages
- Dust particles
- Hand-to-mouth behaviors (esp. children)



Inhalation exposure

- Volatilization from plastics
- Volatilization from fragrances
- Dusts
- Work environments where phthalates are present
 - Manufacturing
 - Retail



Dermal exposure

- Personal care products
- Cleaning products
- Vinyl gloves



Exposure in health care settings

- Medical tubing
- Fluid bags
- Oxygen masks



Questions about exposure to people

- Which **sources of phthalate exposure** most concerning for human health?
- Who are the **key populations of concern**?
- How should we consider **co-exposure** with other endocrine disrupting chemicals?
- What kinds of **health education materials** would help people reduce exposure?

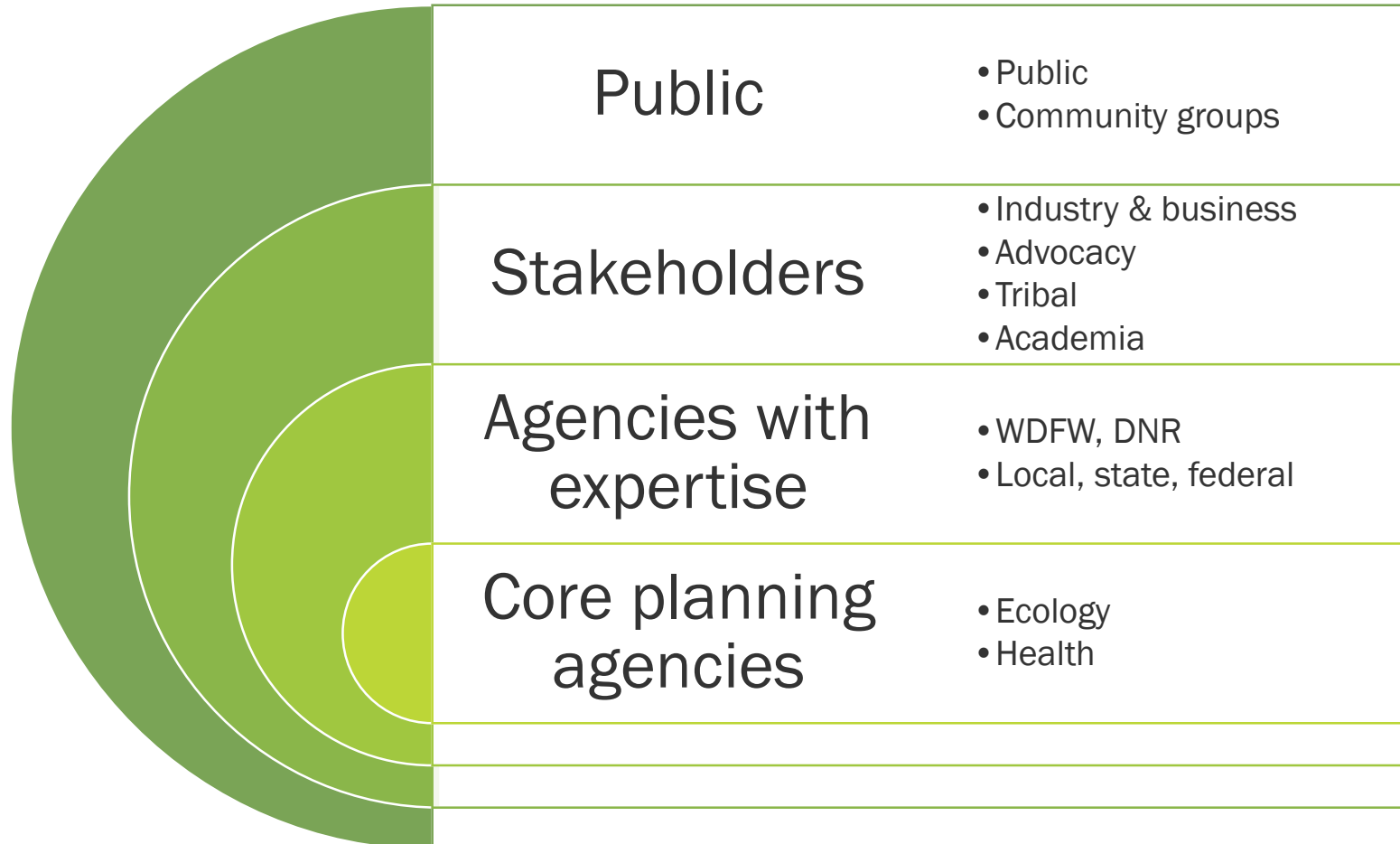
Share your concerns and ideas with us!



Section 4

Outreach and engagement

Improving outreach & input



Stakeholder input & community outreach

- Advisory Committee
 - Input early and often, contribute to decisions
- Broader stakeholder group
 - Participation not limited to the committee
- Public and community education
 - Part of broader program
- Outreach to community organizations
- Potential workshop
 - Outreach/education event later in the process





Poll Question 1

Who is represented on today's call?





Poll Question 2

What type of meeting length and focus do you prefer?





Poll Question 3

How do you prefer to discuss topics during the sessions?





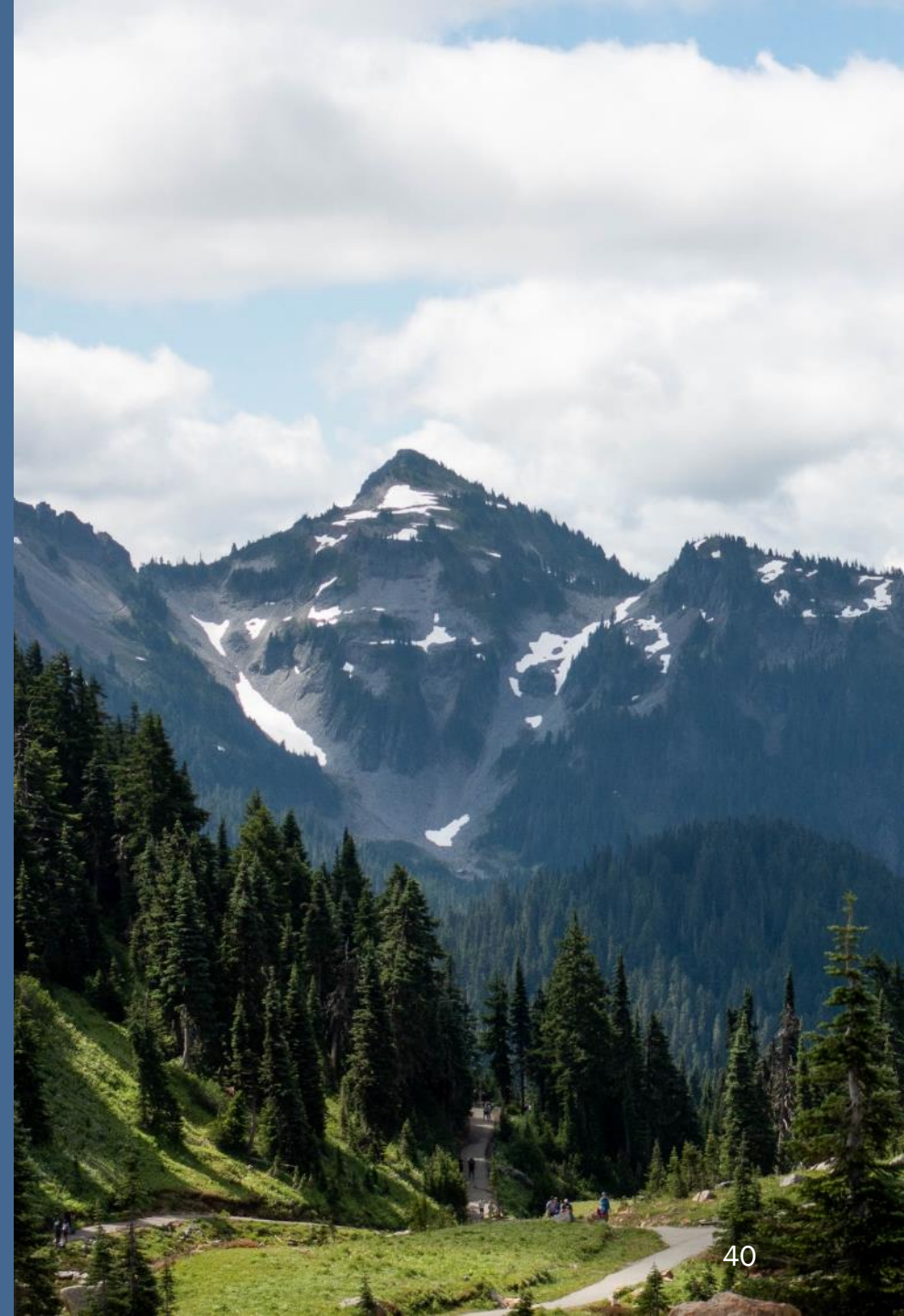
Poll Question 4

How do you prefer to learn new information about toxic chemicals?





Q & A



Discussion/Q&A notes

Find a recap from the discussion in the input session summary:

https://www.ezview.wa.gov/Portals/_1962/Documents/Phthalates/November2021_InputSessionsSummary.pdf



Section 5

More information and contact

More information

- Ecology:
 - <https://bit.ly/phthalates-AP>
 - <https://ecology.wa.gov/phthalates>
- Puget Sound Partnership:
 - https://pugetsoundestuary.wa.gov/wp-content/uploads/2021/09/2018-0465_InitialFactsheet.pdf
 - <https://actionagenda.pugetsoundinfo.wa.gov/Project/Detail/13091>
- E-mail list subscription:
 - <http://listserv.ecology.wa.gov/scripts/wa-ECOLOGY.exe?SUBED1=PHTHALATES-ACTION-PLAN&A=1>



Thank you

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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 presentation 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.