

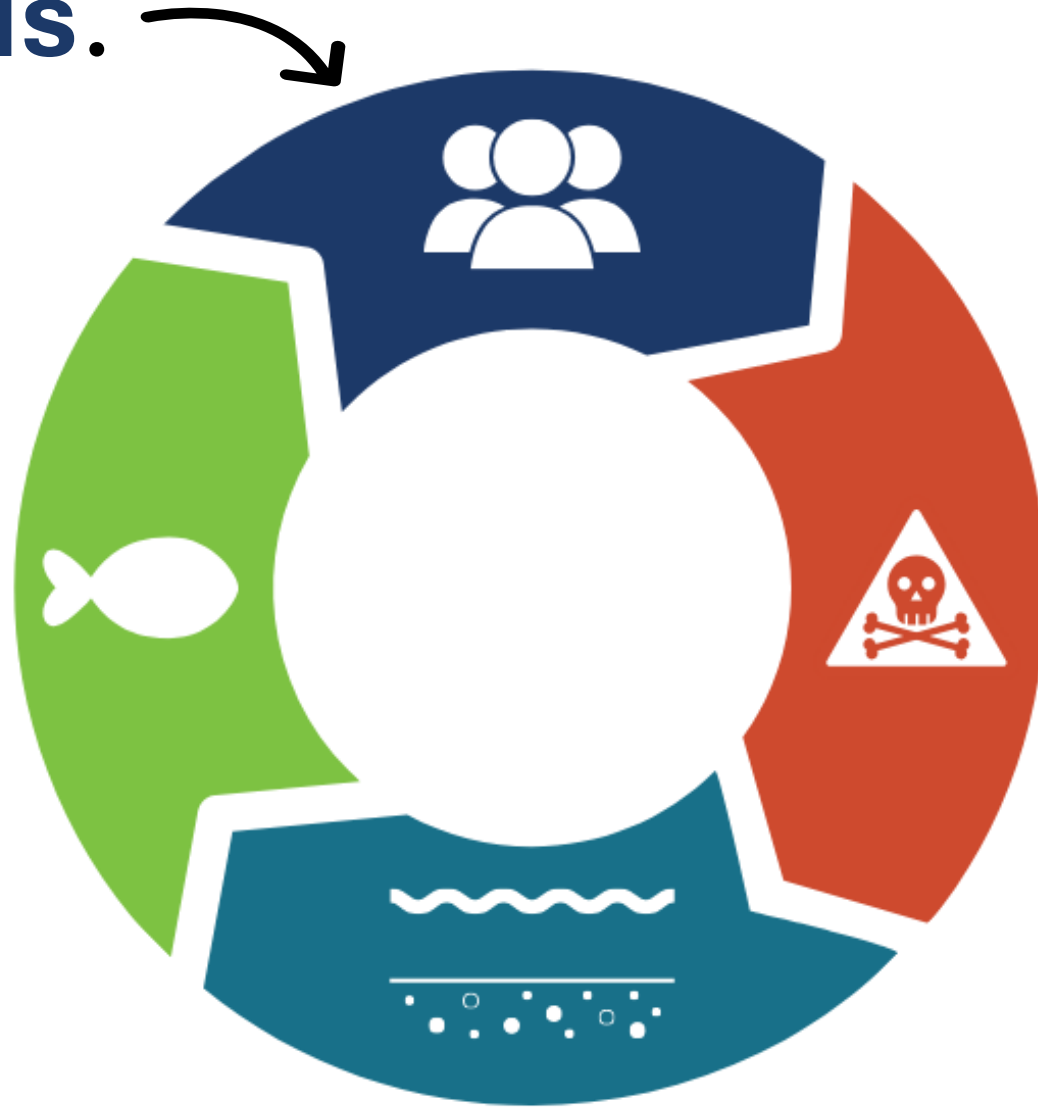
Science Stories 2026:

What Elliott Bay's benthic environment is telling us about PCBs (and ourselves)



People make **toxic chemicals** that
contaminate **water and sediment,**
fish, and... **people.**

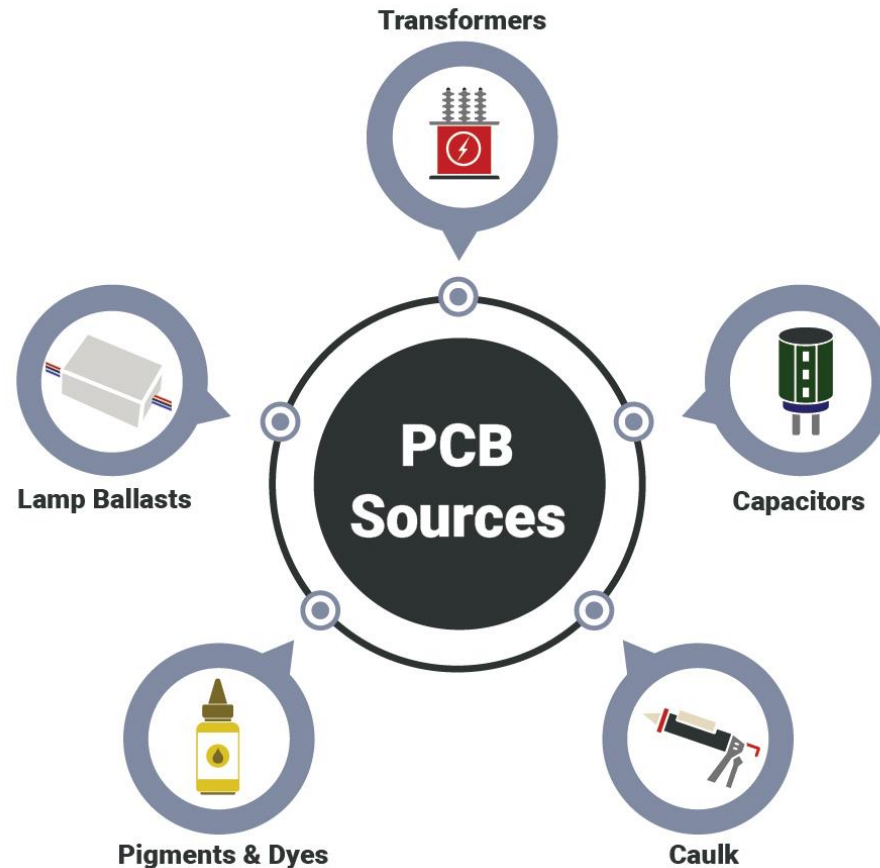
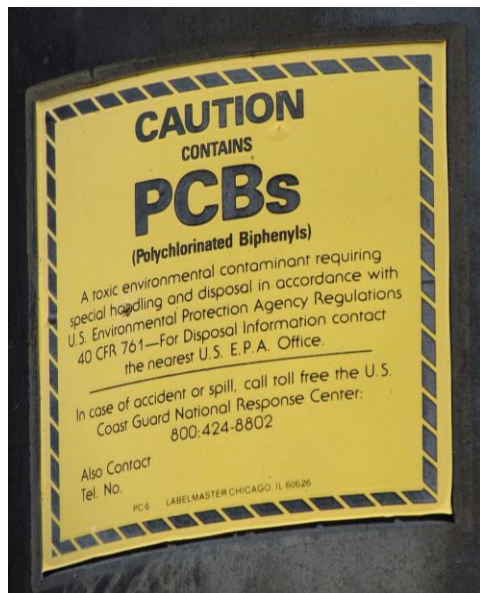
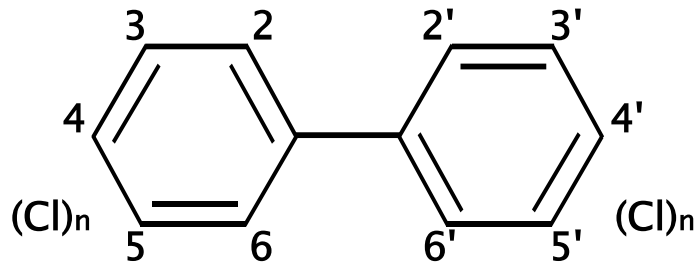
This toxic cycle
begins with **us**.



King County scientists monitor toxic chemicals in the environment and aquatic animals



PCBs are persistent toxic chemicals that come from many sources and harm human health

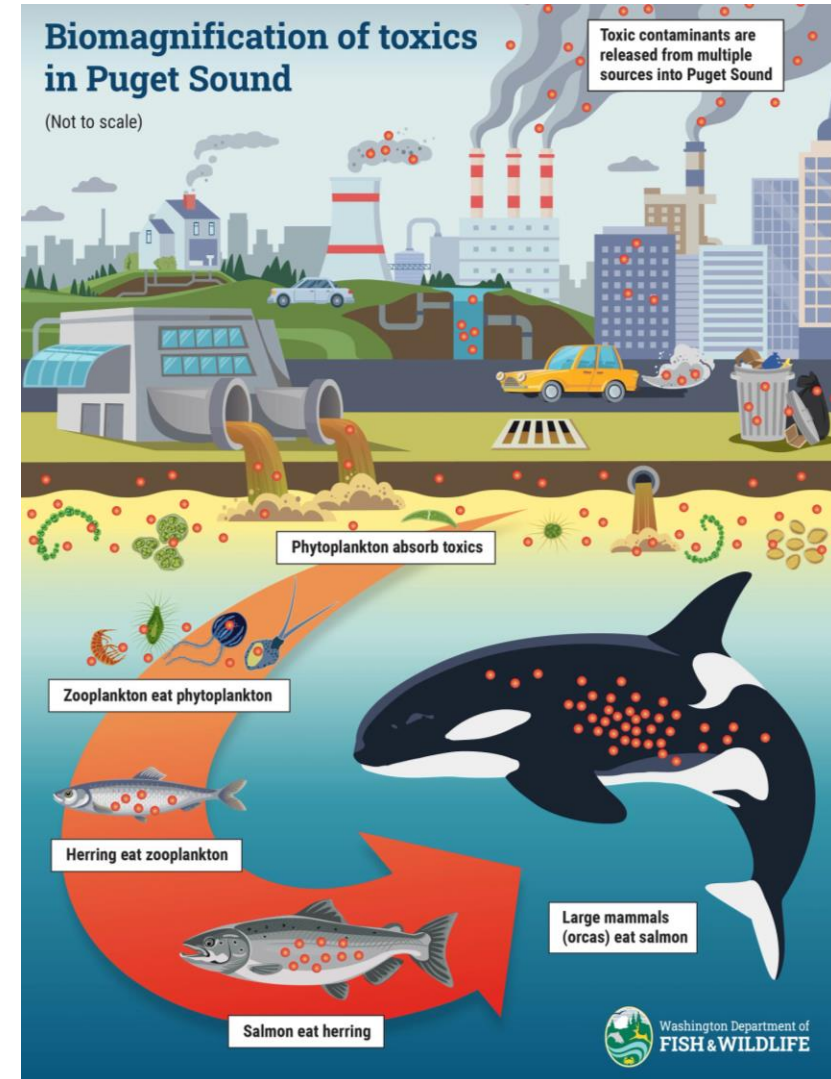
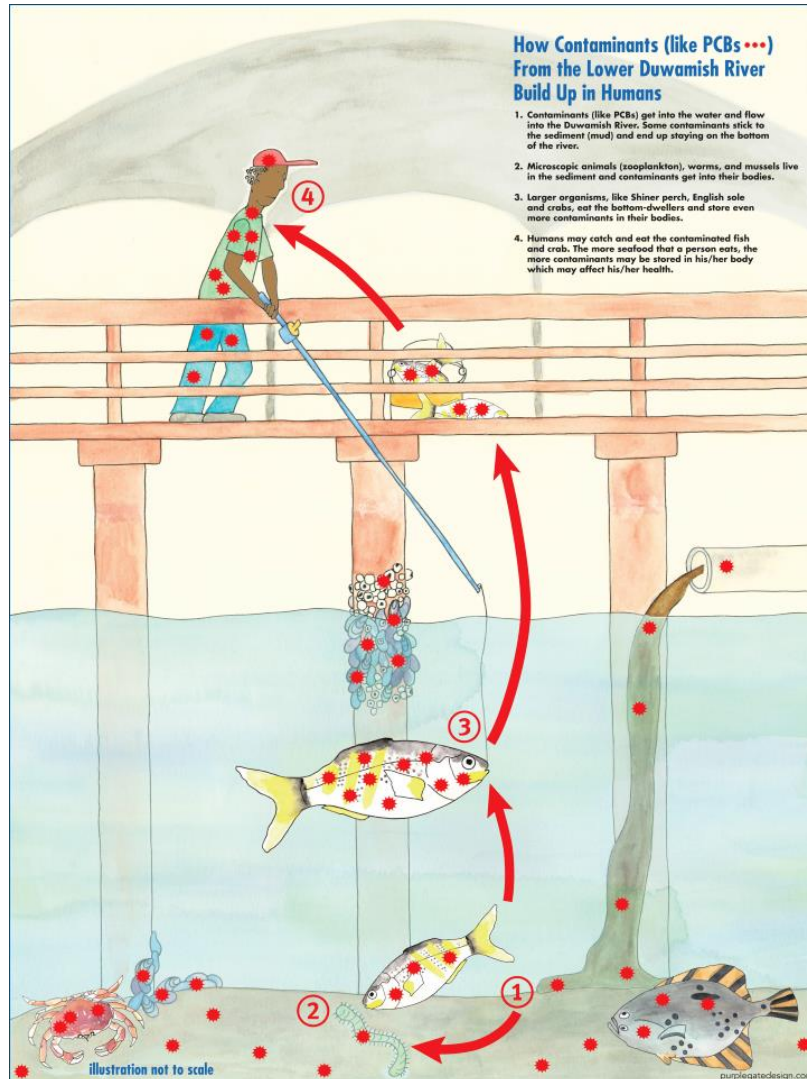


- Higher risk of cancer
- Skin problems like acne and rashes
- Lower immune response and increased disease
- Liver damage



- Behavioral and memory problems
- Reduced brain development
- Lower birth weight

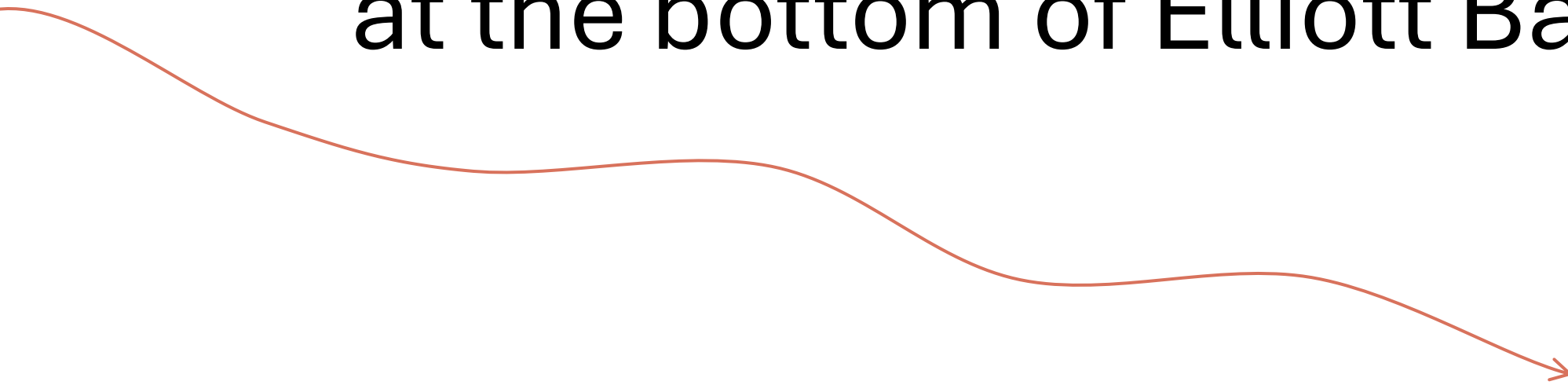
PCBs *bioaccumulate* and their harms are *biomagnified* as they move through the environment and the food web



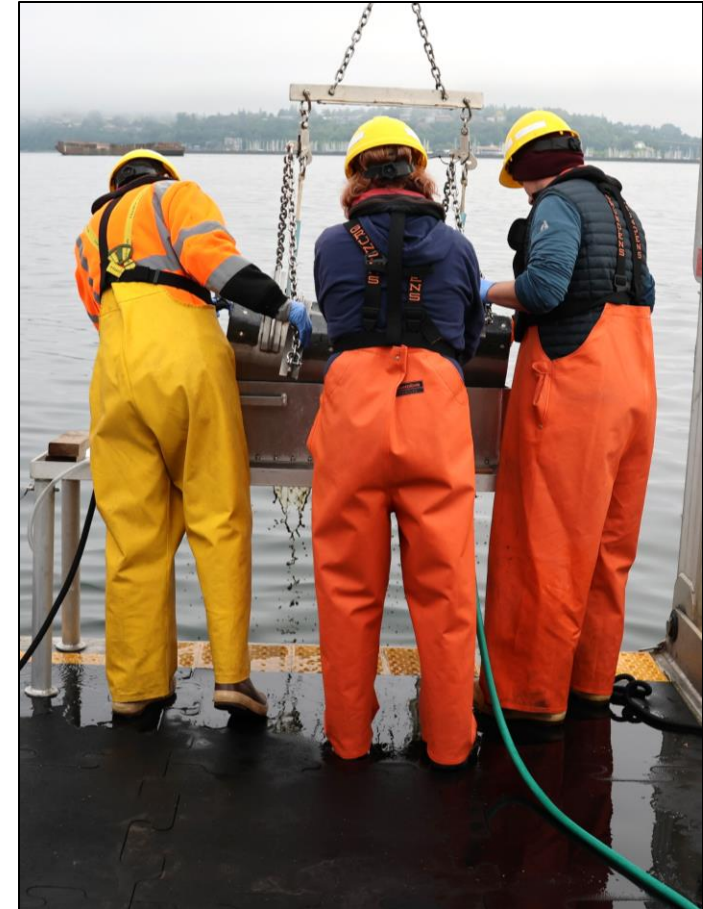
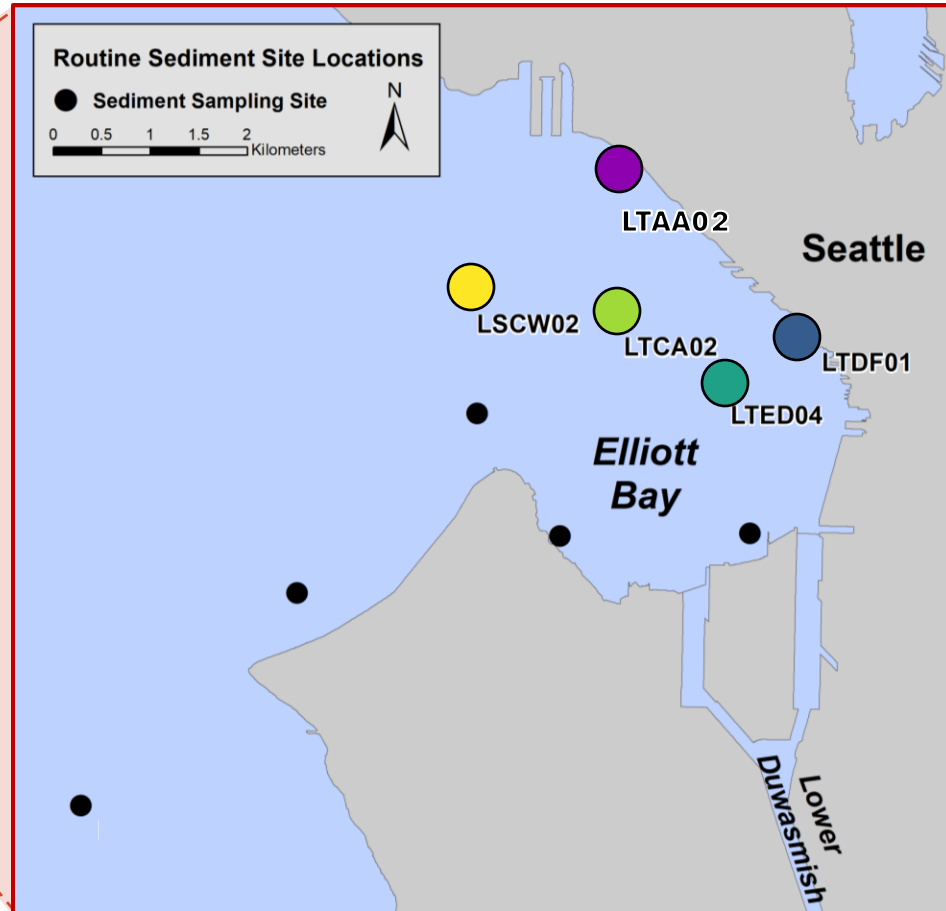
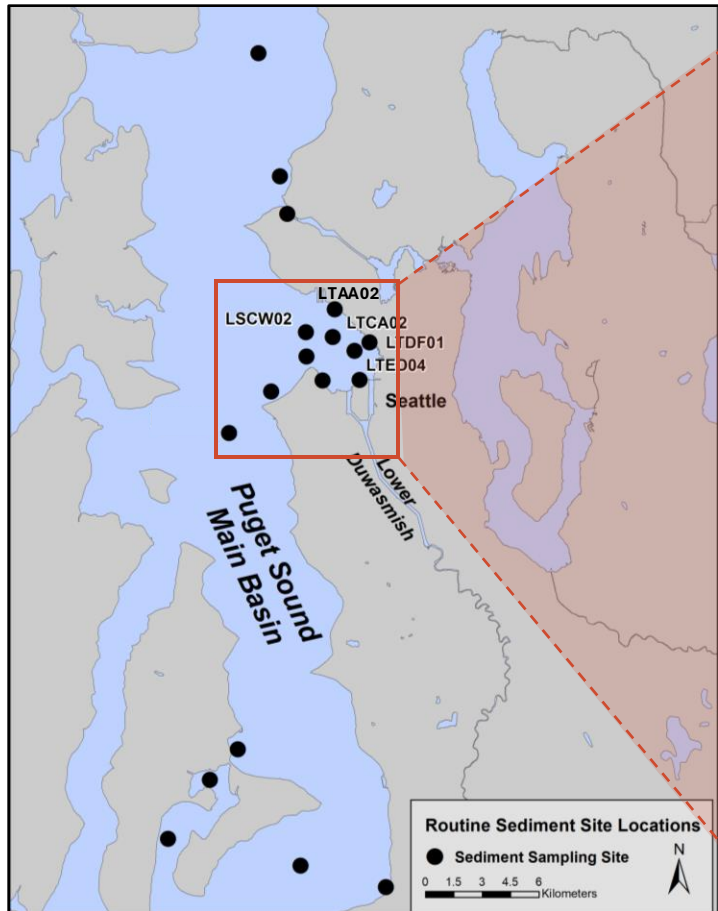
Despite a 1978 production ban, PCBs still cycle through the environment and are carried by stormwater into Puget Sound



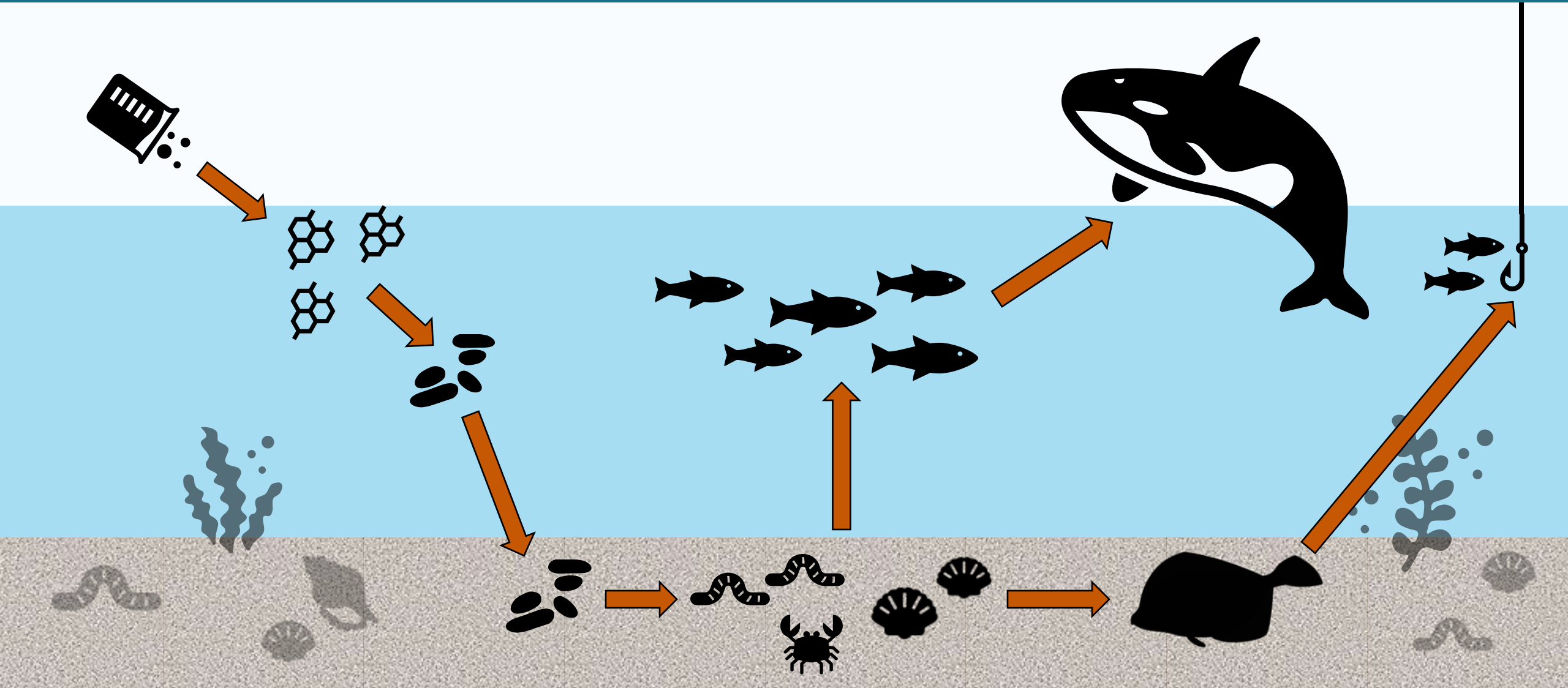
But there's good news:
PCBs are decreasing
at the bottom of Elliott Bay.



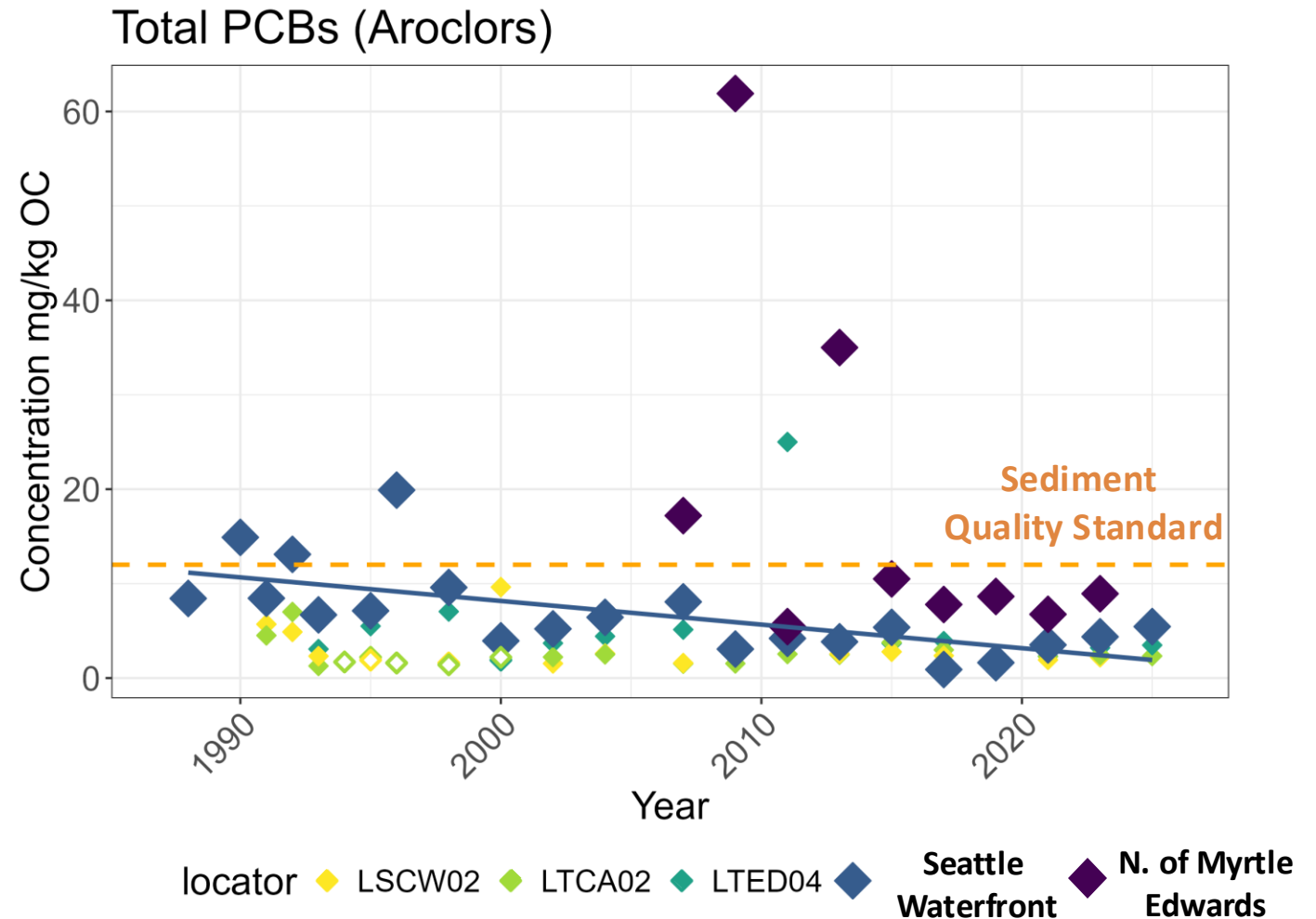
For more than 35 years, King County has collected sediment samples in Puget Sound



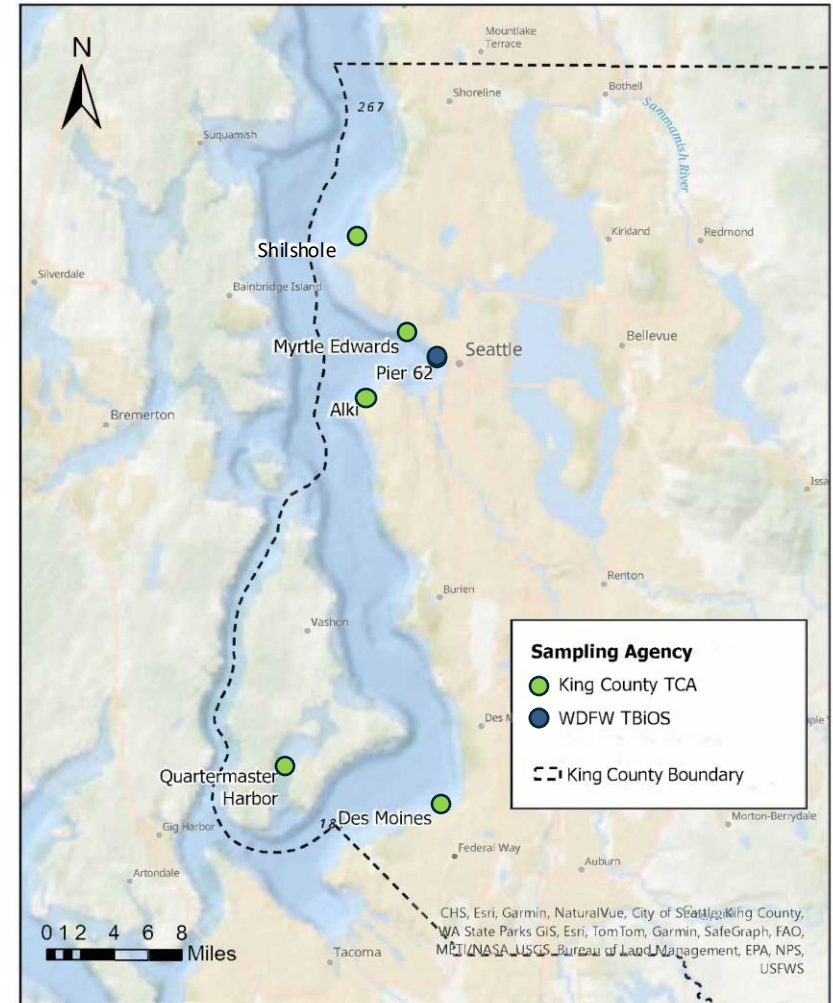
We sample sediments because they collect our chemicals and transfer them to living organisms



PCBs are decreasing in Elliott Bay sediment at five monitoring locations



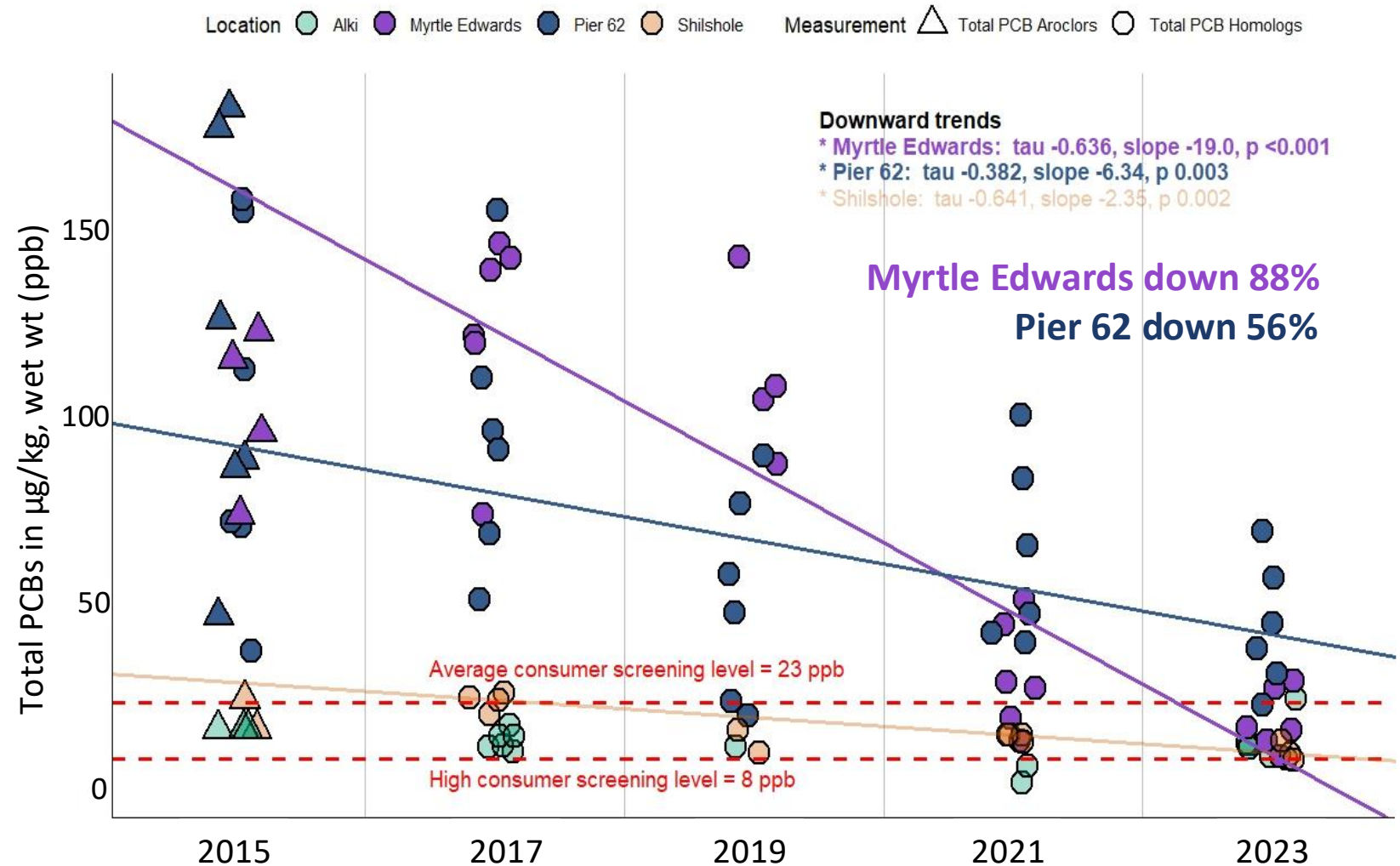
For the past eight years, we have also collected tissue samples from English sole in Puget Sound



We sample English sole because they absorb toxics in multiple ways and are then eaten by other animals



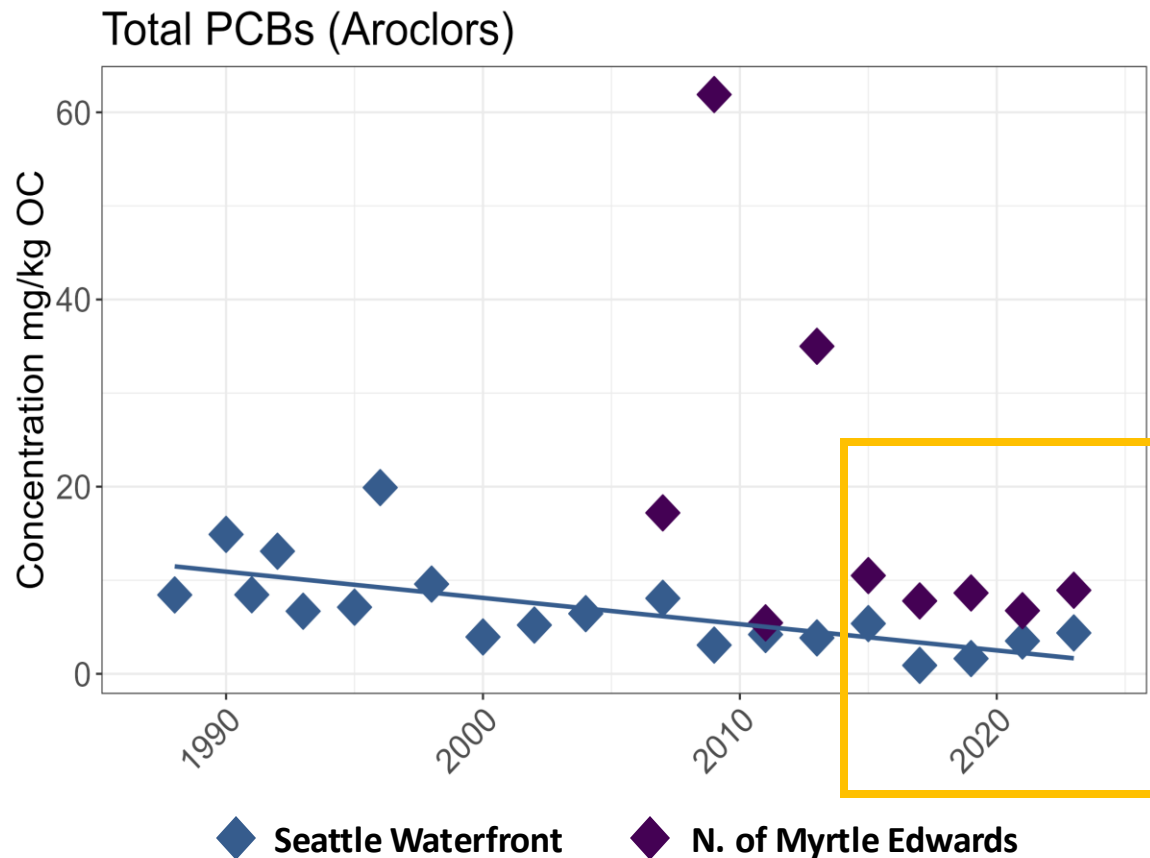
PCBs are decreasing in English sole taken from two locations in Elliott Bay and one in Shilshole



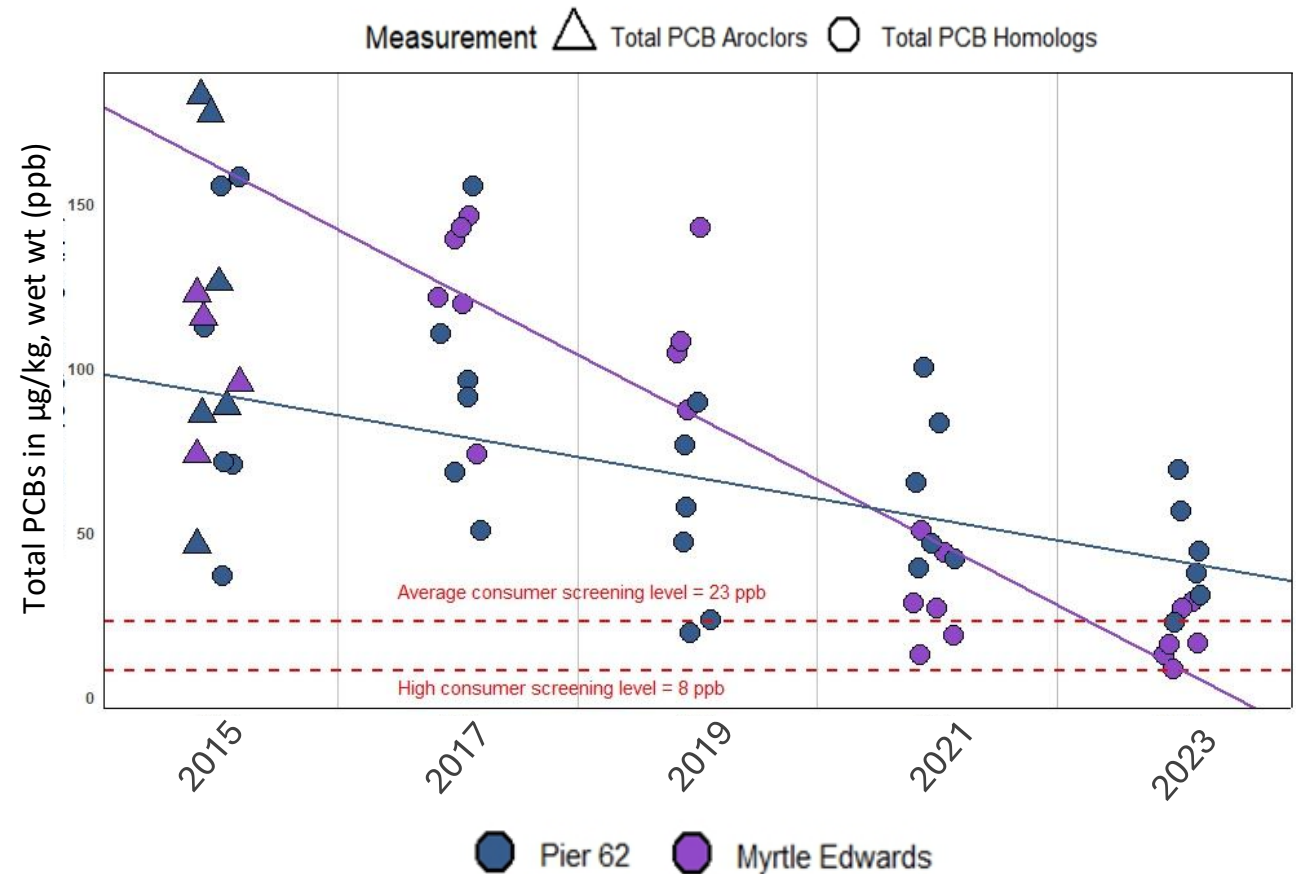
At two locations in Elliott Bay, we sample both sediment and English sole



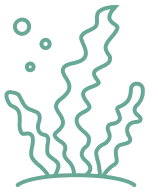
PCBS IN SEDIMENT



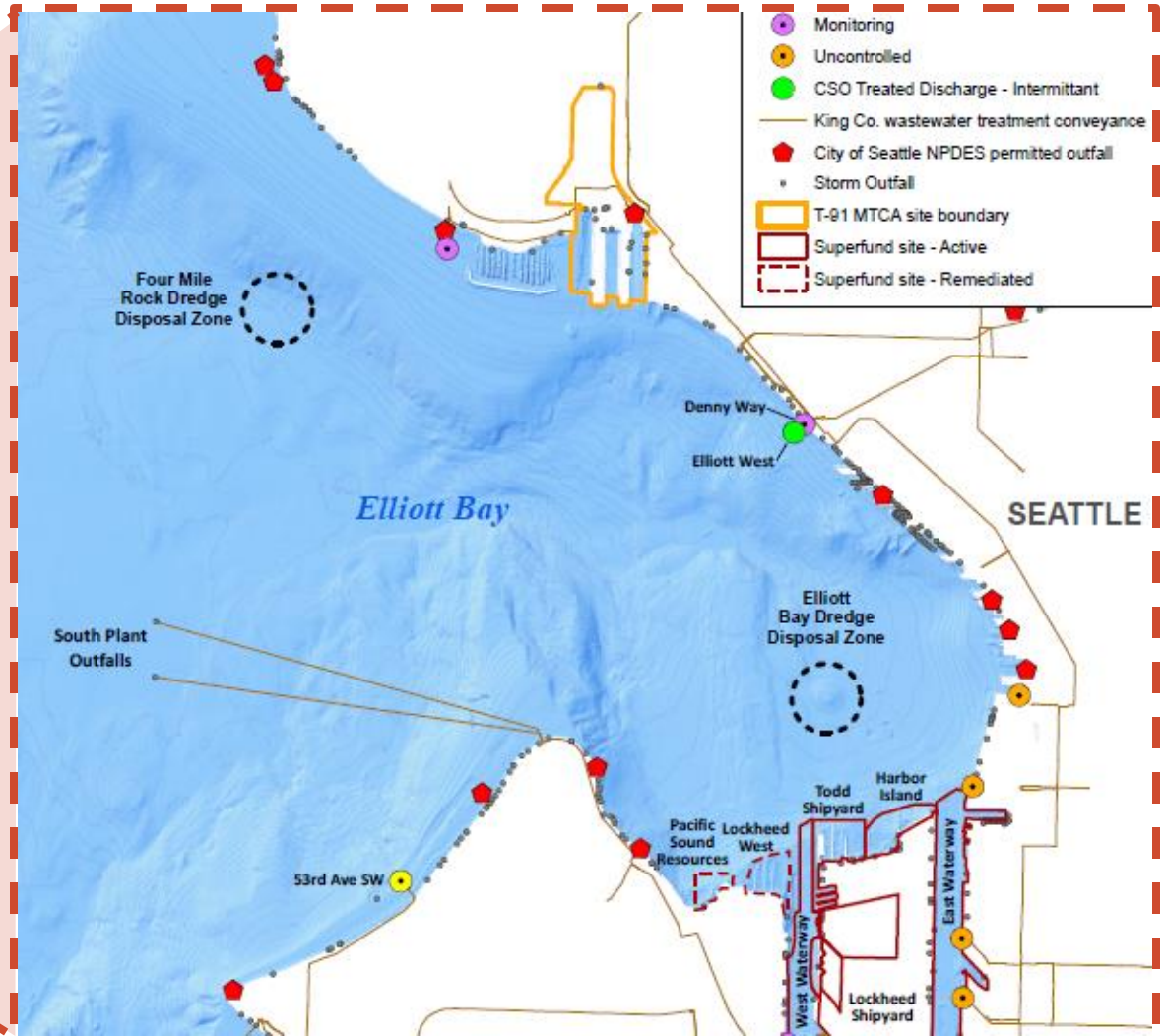
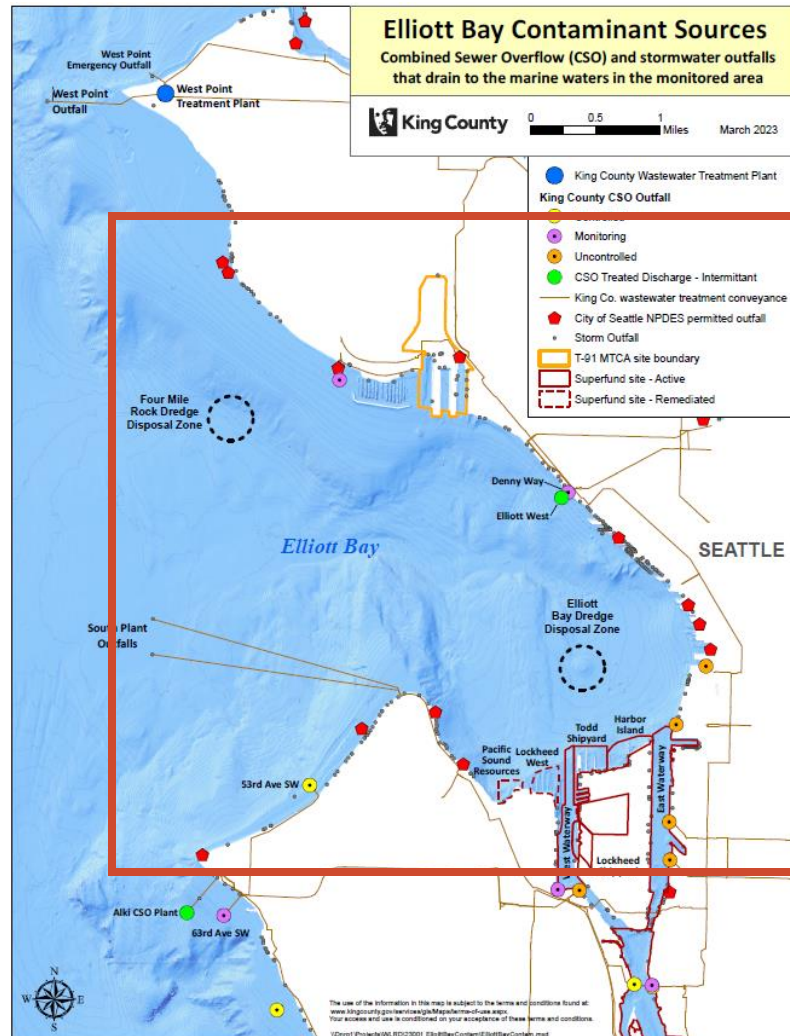
PCBS IN ENGLISH SOLE



PCBs are decreasing
in sediment and English sole.
But why?



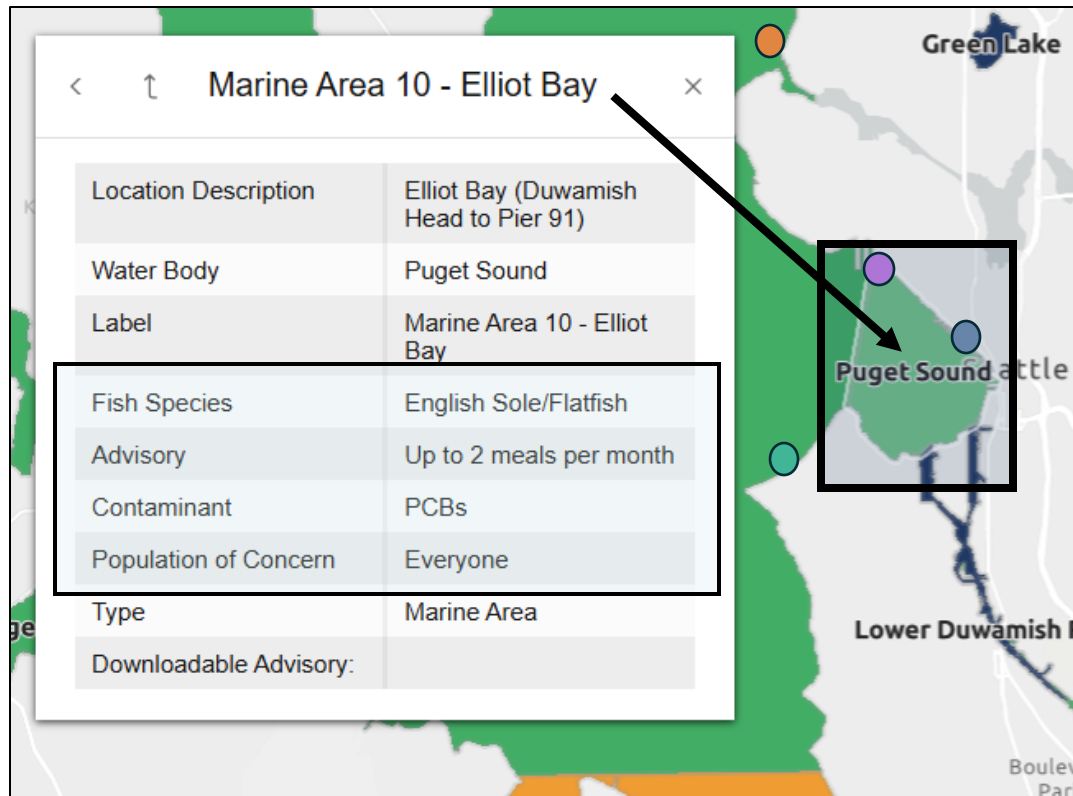
It's hard to pinpoint specific causes because PCBs can enter Elliott Bay from so many sources



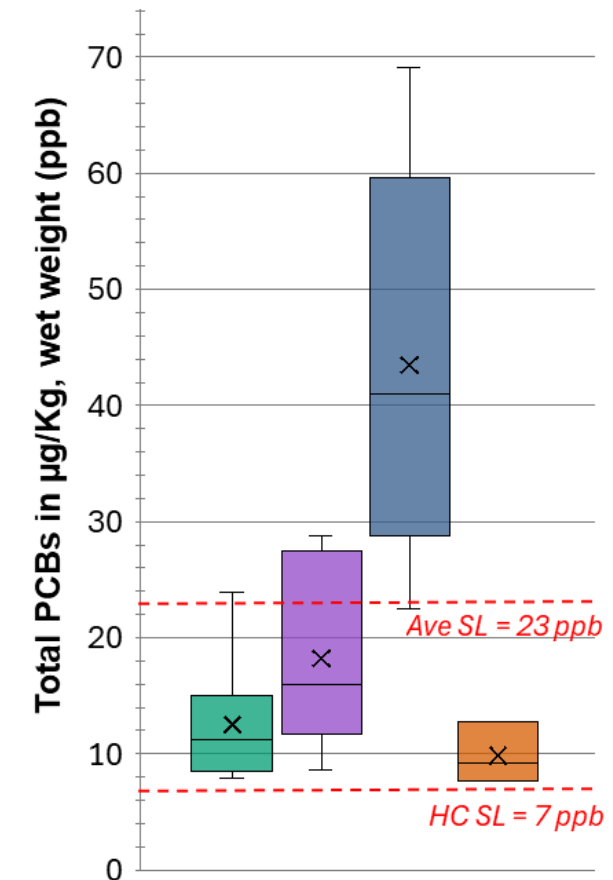
We still need fishing advisories, especially for people who consume lots of fish



PCB-based fish consumption advisories



PCBs in English sole (2023)



Location ● Alki ● Myrtle Edwards ● Pier 62 ● Shilshole

We can continue to
turn down the faucet
and reduce **PCBs**.



We can reduce PCBs in our homes, offices, stormwater, and environment



Identify and replace



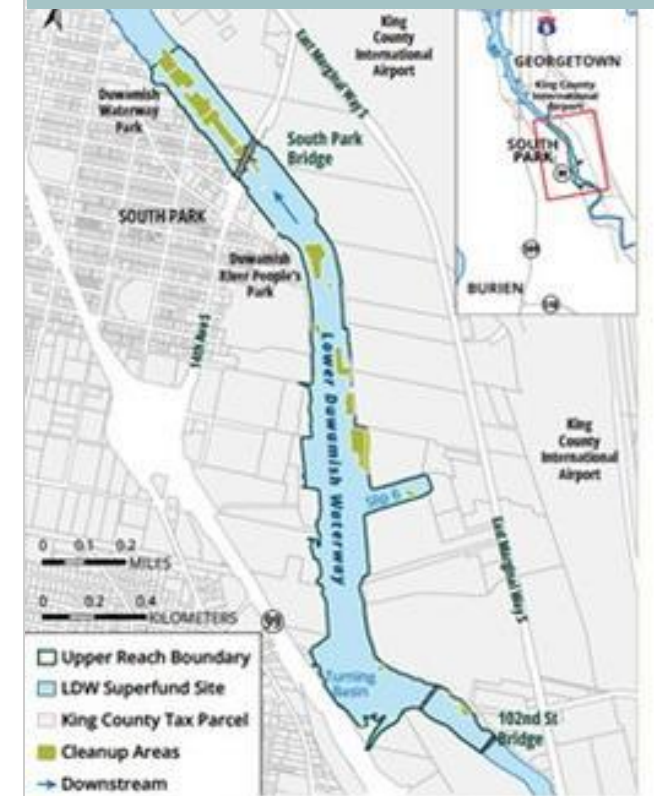
Promote BMPs



Treat stormwater



Continue clean-up



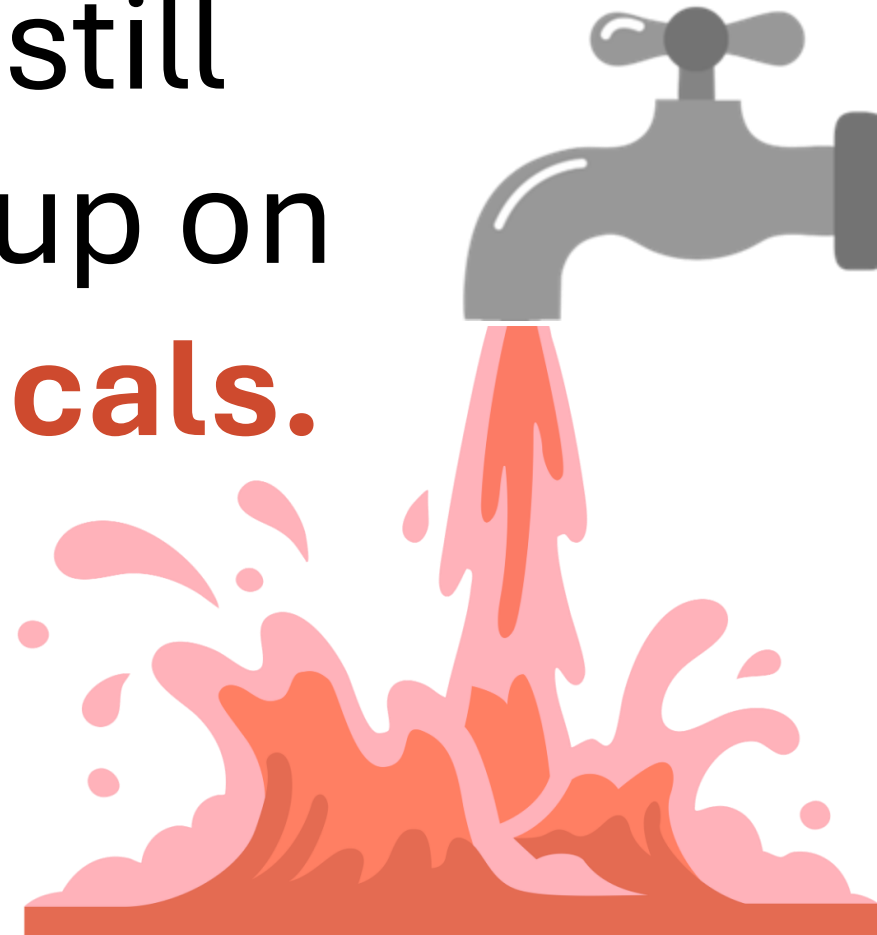
Map of the Upper Reach Cleanup Areas
Source: Lower Duwamish Waterway Group

 **DEPARTMENT OF ECOLOGY**
State of Washington

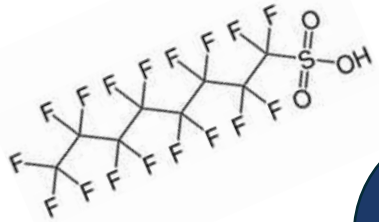
Focus on: How to Protect Stormwater from PCBs in Building Materials



But the faucet is still
turned all the way up on
other toxic chemicals.



PFAS are found in many everyday products, but there are steps people can take to reduce exposure



Studies suggest PFAS are related to:

PFAS-free Products:
database.pfasfreelife.com

Stain-Resistant
Carpeting

Non-Stick
Cookware

Fast Food
Packaging

response to
vaccines

- Increased risk of thyroid disease

Paints

Makeup & Personal
Care Products

Firefighting
Foams

King County is addressing the effects of PFAS on our communities and environment



**Research,
monitor, test**



**Legislation,
regulation, and policy**



**Legal
action**

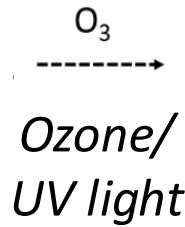
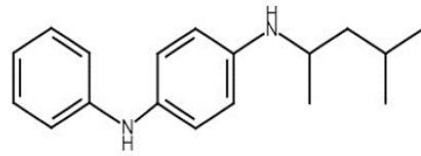


<https://kingcounty.gov/en/shared-topics/health-safety/pfas-forever-chemicals>

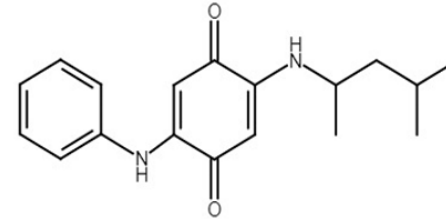
6PPDQ is a tire chemical that pollutes air and water and kills Coho salmon



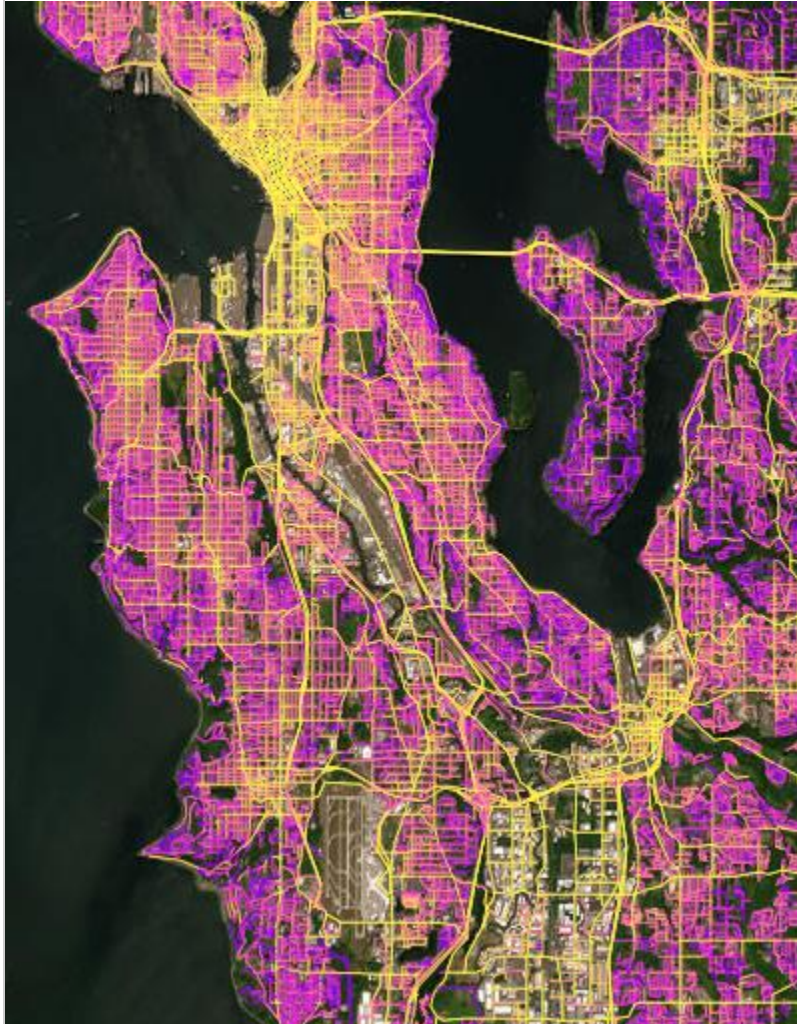
6PPD



6PPDQ



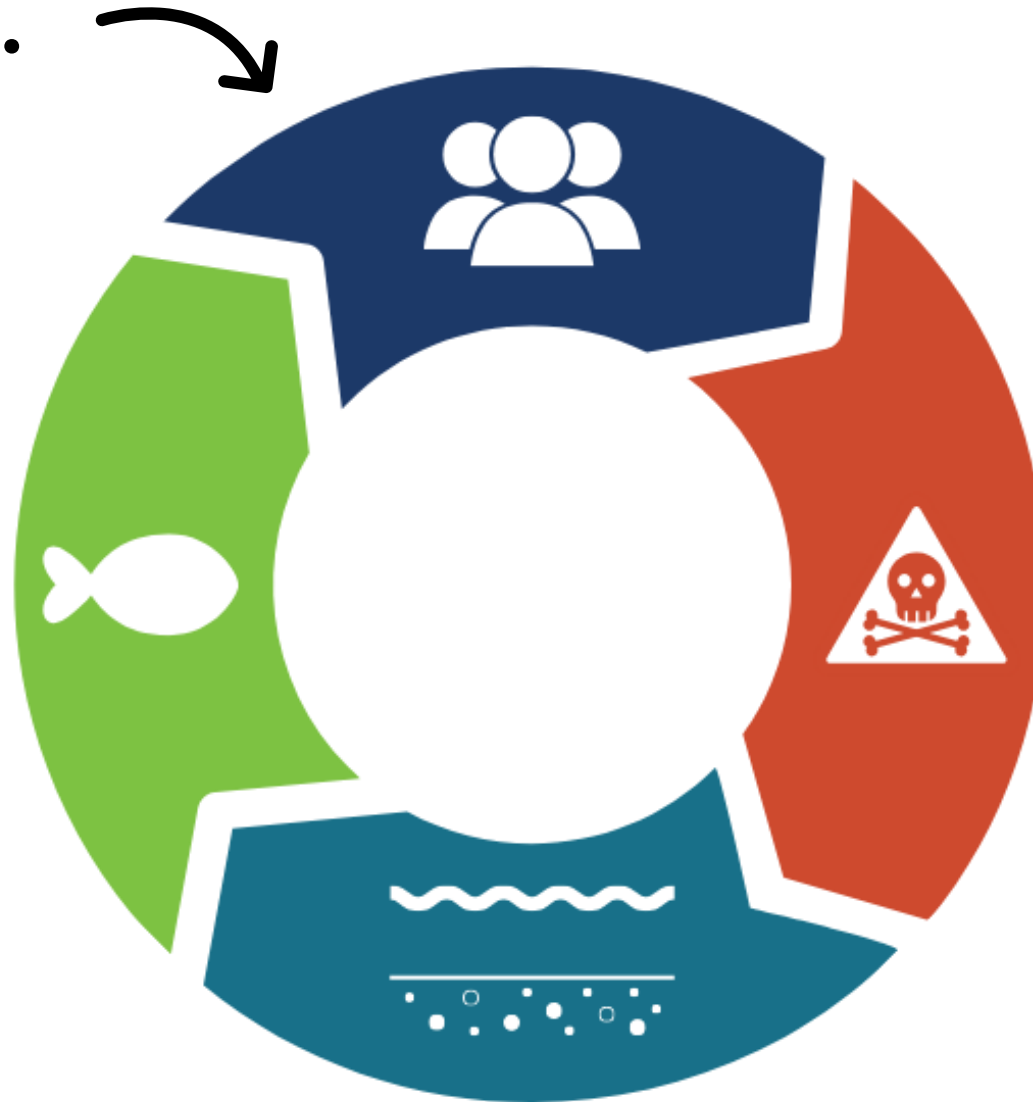
King County is addressing 6PPDQ through modeling, research, and real-world implementation



**Science, data-driven regulation,
and personal actions can
make things better.**



The toxic cycle ~~begins~~
ends with **us**.



Thank you:

- King County Environmental Laboratory
- Washington Department of Fish and Wildlife
- Seattle King County Public Health

Questions?

