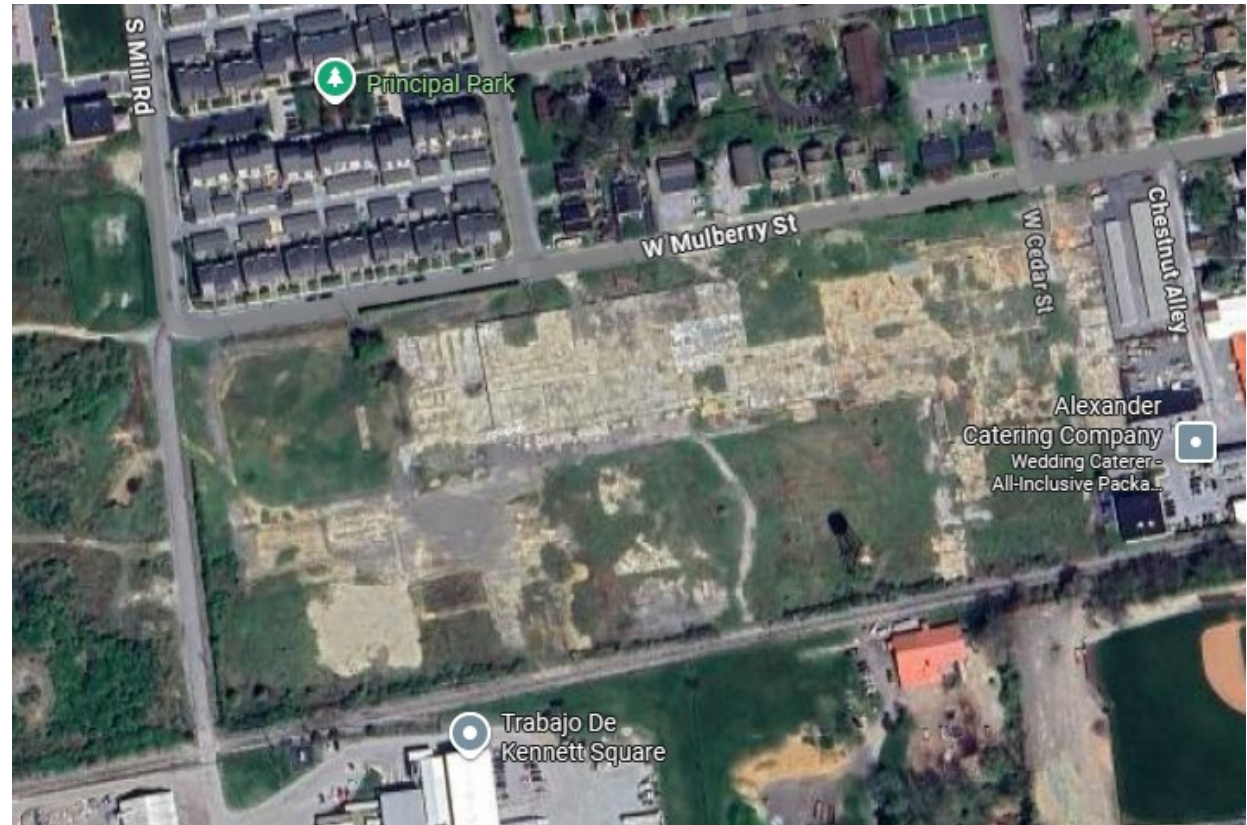


EPA's PCB Cleanup Program

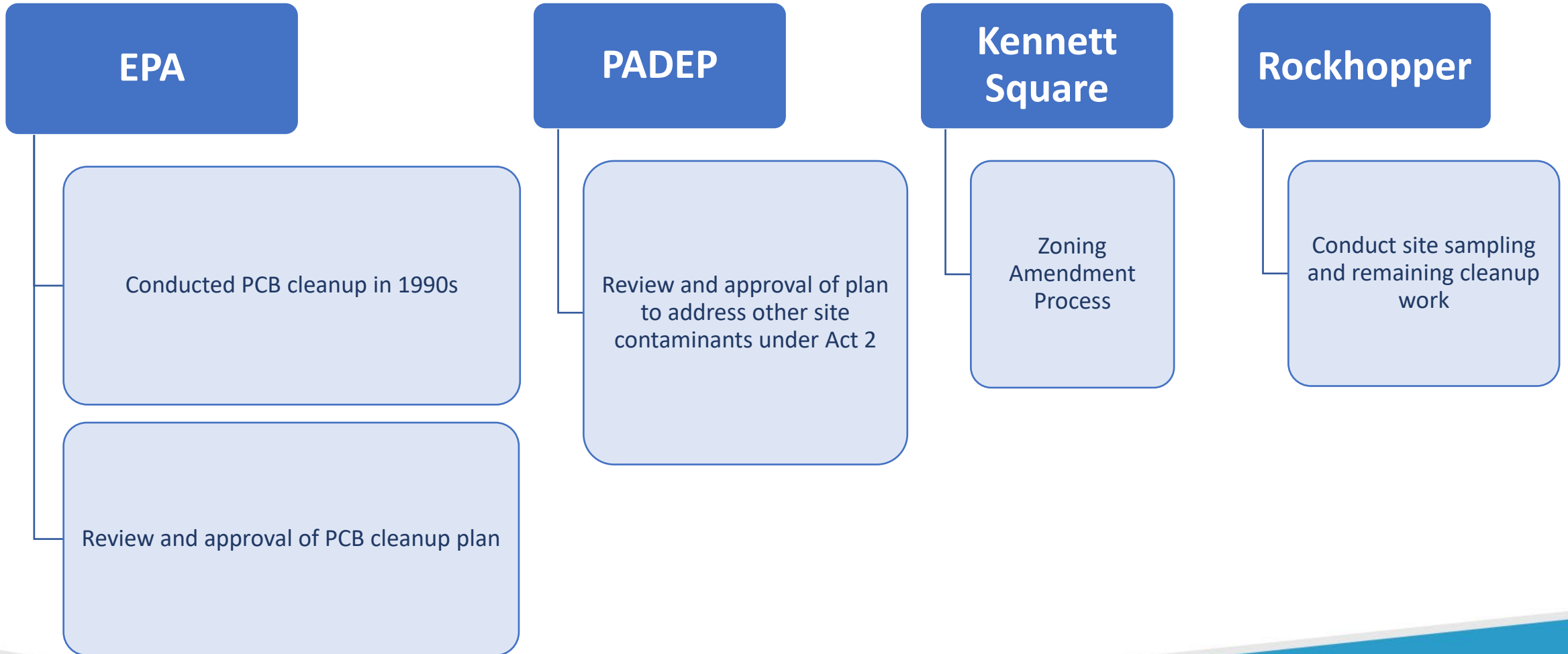
Kennett Square Public Presentation
January 2026

Agenda

- Agency Roles
- Brief Site History
- Properties of PCBs
- Regulatory Overview
- PCB Cleanup Levels
- Next Steps
- Contact Info

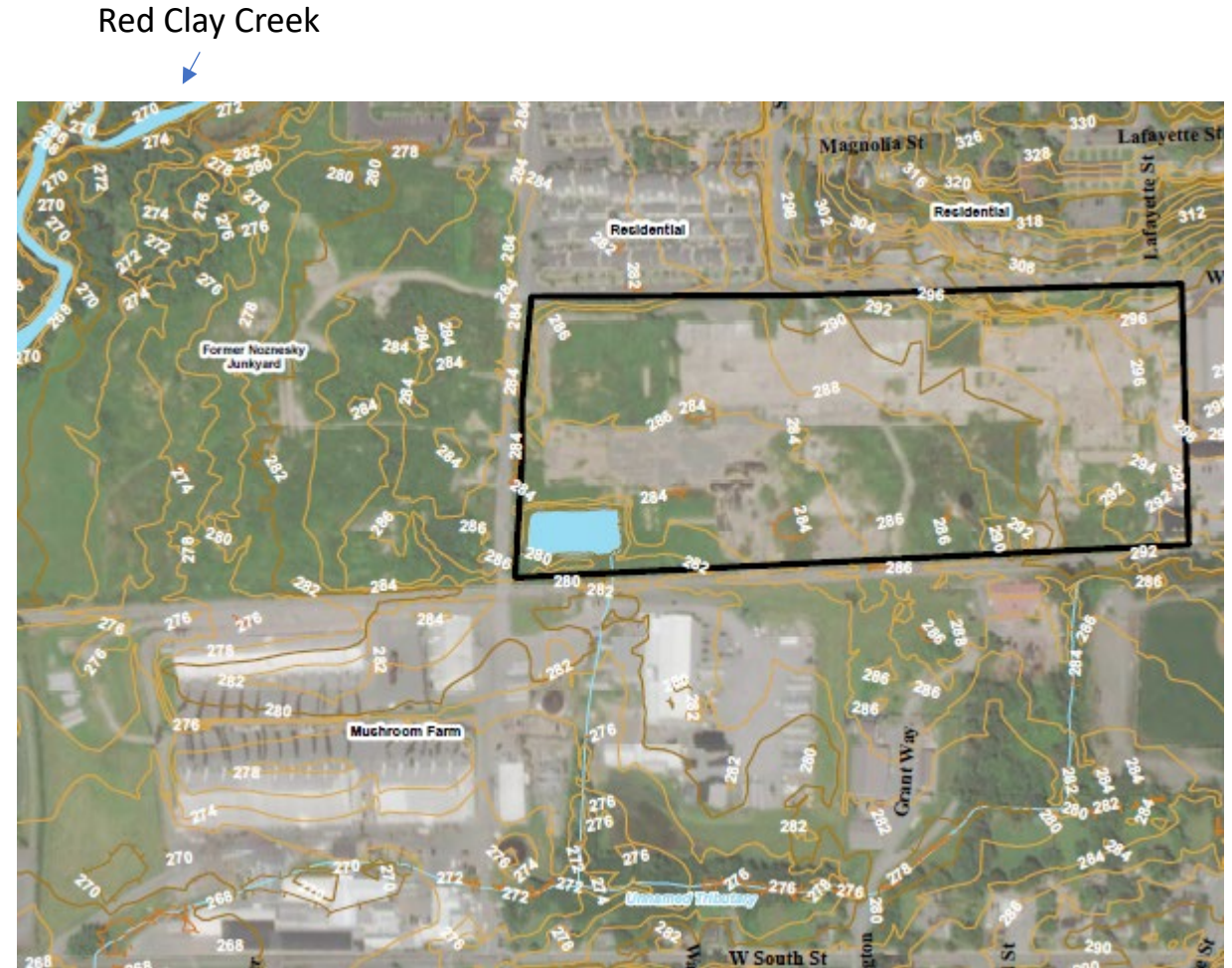


Roles



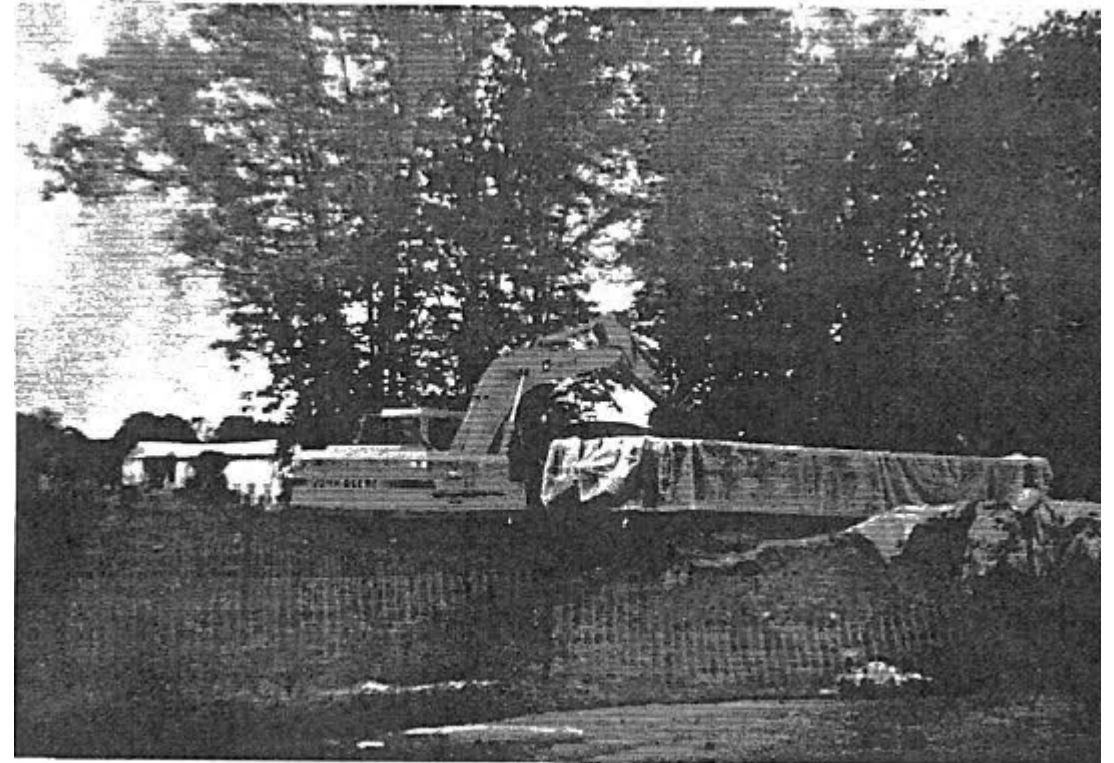
Site History

- **1982** – Fish and Wildlife Service identified high PCB concentrations in Red Clay Creek
- **August 1987** – NVF begins on site PCB cleanup under EPA oversight
- **November 1992** – EPA begins additional on and off-site cleanup
- **2007** – NVF declares bankruptcy
- **2009** – Rockhopper LLC acquires property



Historic Cleanup Activities

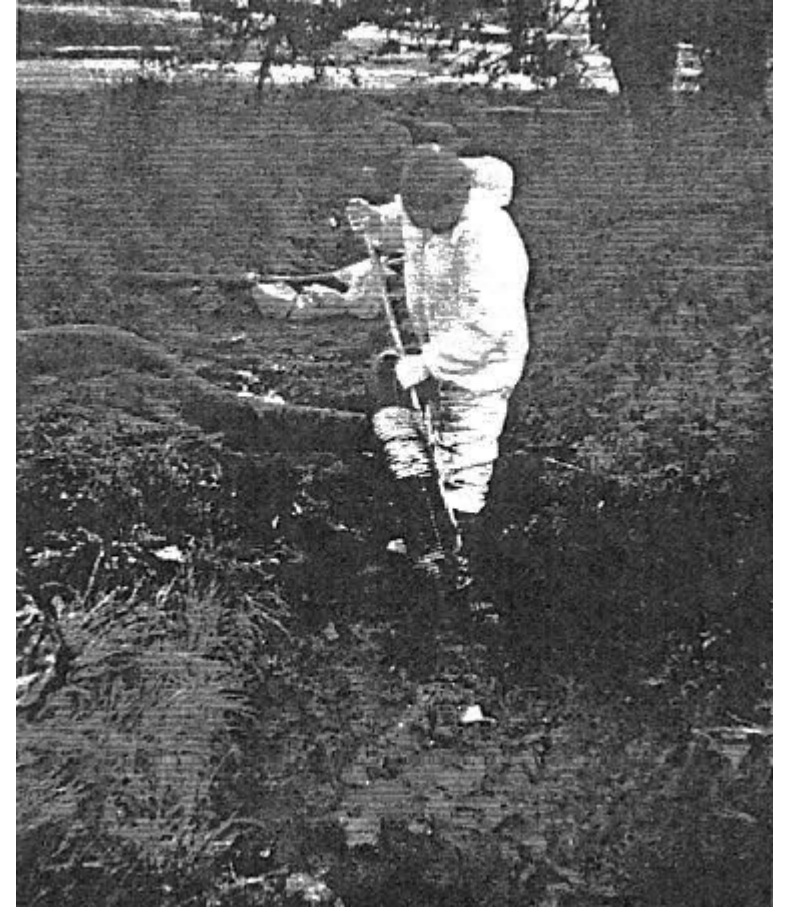
- NVF removed over 400 cubic yards of soil on site, but then discovered additional PCB contamination in drainage ditch
- EPA determined site warranted further cleanup due to risk of exposure to hazardous substances
- PCB concentrations 200 times above the 50 ppm action level were detected in drainage ditch
- Phase I - **January 1993**, Phase II - **April 1994**



Loading soil into railcar for disposal

Historic Cleanup Activities

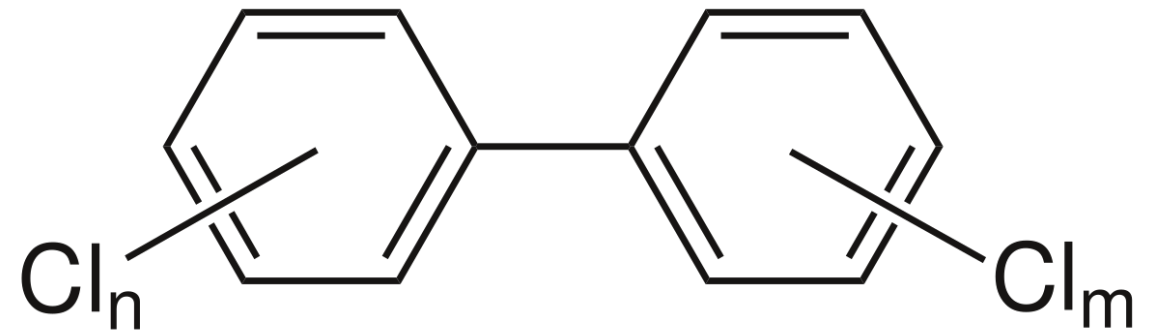
- 7,372 tons of PCB-contaminated soil and sediment removed by EPA
- Temporary dams installed in tributary; sediment removed by vacuum truck
- Due to bank contamination of swale, swale drainage was rerouted through a metal pipe and buried with clean fill after banks were excavated
- Clean fill placed on top of excavated areas
- Soil transported to disposal facilities in Utah and New York by rail and truck



Sediment Vacuuming

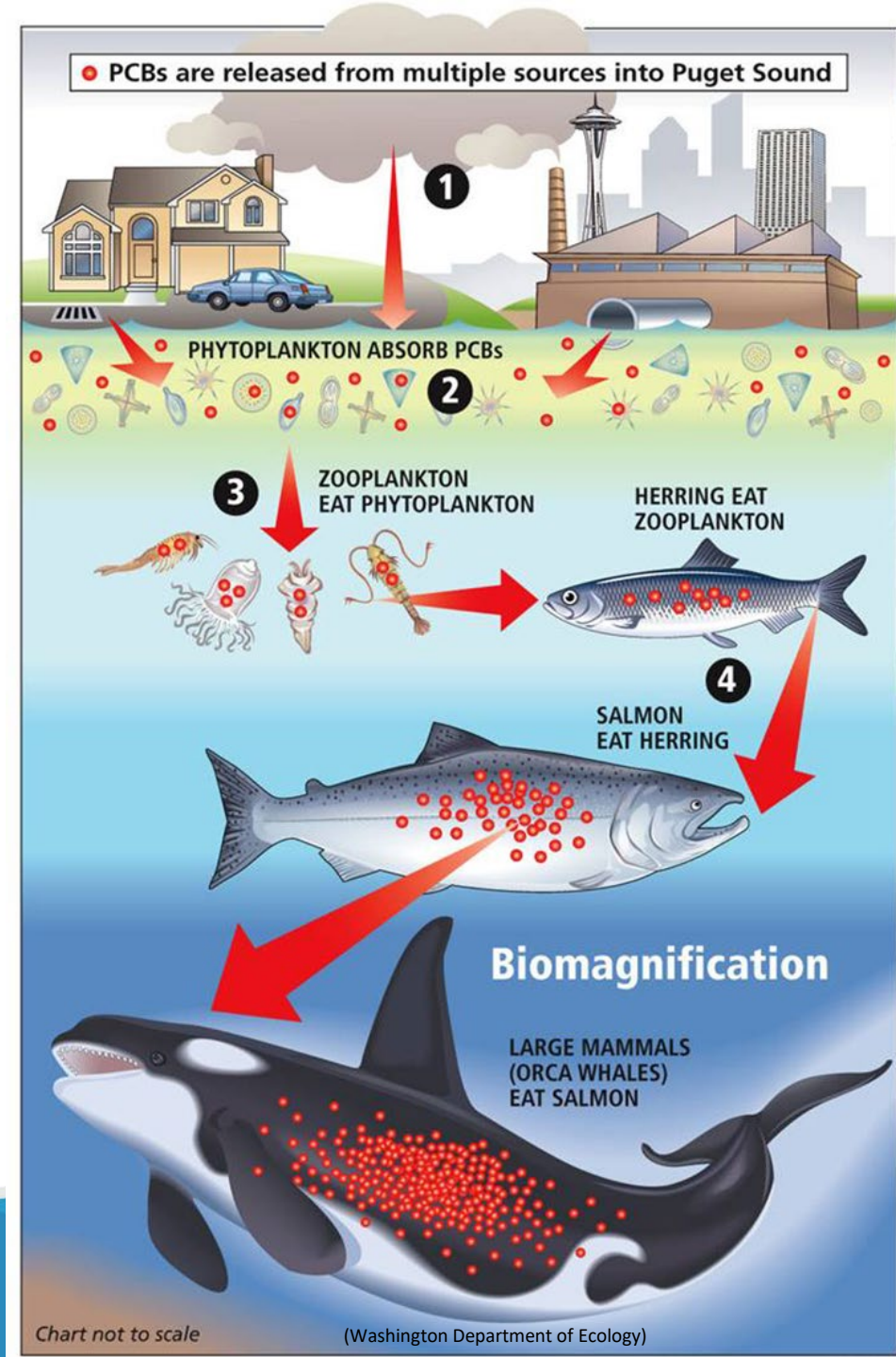
What are PCBs?

- Polychlorinated biphenyls – manufactured in US from 1929 to 1979
- 209 different chemical compounds (congeners)
- Probable carcinogen – liver, breast, non-Hodgkin lymphoma, malignant melanoma
- Endocrine disrupter, birth defects, developmental delays, immune system dysfunction
- Multiple exposure routes, dermal, inhalation, ingestion of food, water, or soil



PCBs in the Environment

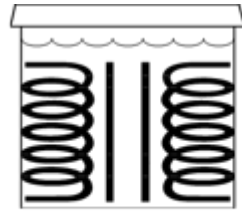
- Persistent, bioaccumulative, and can be transported long distances
- Found in remote areas due to air deposition
- Half-life 10-15 years in humans
- 90% of human exposure is through food
- For context, EPA unrestricted use in soil is 1 ppm. FDA limit for PCBs in salmon is 2 ppm and 1.5 ppm in milk.



Physical Properties of PCBs



Flame retardant



Low electrical conductivity



Low vapor pressure



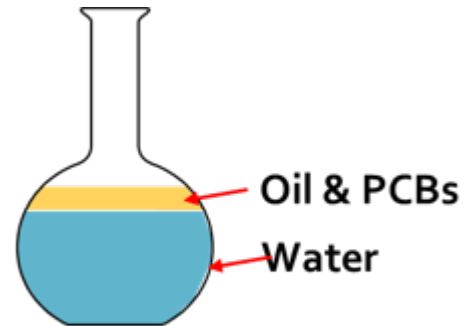
Colorless



Viscous liquid or solid



Odorless

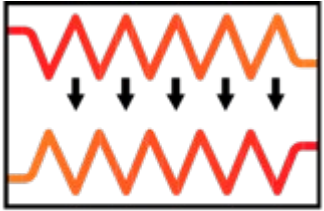


Lipophilic

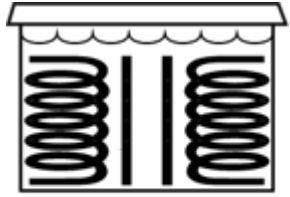


Stable to aging

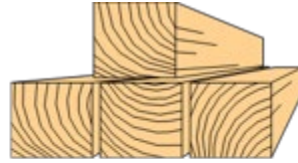
PCBs in Commercial Use



Heat transfer fluid



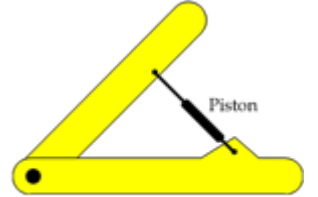
Dielectric fluid



Construction materials
(ex. caulk, sealants, tiles,
etc.)



Fluorescent light ballasts



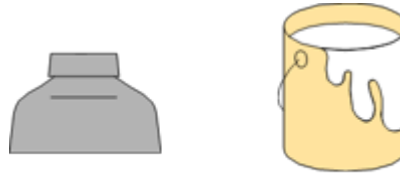
Hydraulic fluid



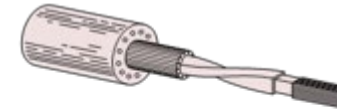
Lubricants



Carbonless copy
paper



Inks and paints



Electric cable
insulation



Fuel tank coatings



Pesticide extenders



Adhesives



Microscopy
(mounting media & immersion oil)



Plasticizer



Dusting Agent

PCB Properties

- PCBs are lipophilic, they do not dissolve easily in water
- Groundwater contamination not typically an issue at low soil concentrations
- If solvents are present, they may dissolve PCBs into groundwater
- Tendency to stick to soil and accumulate in sediment

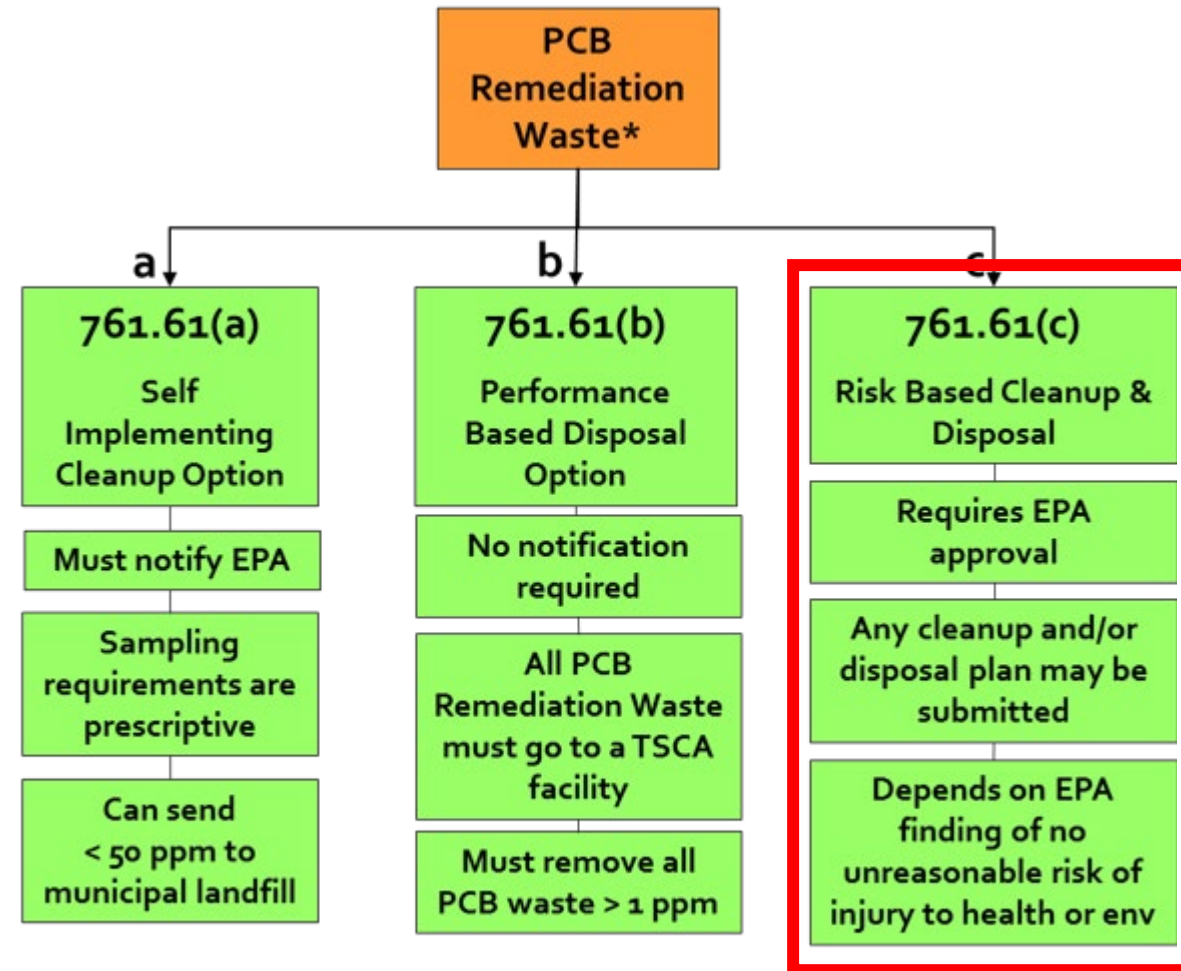


Liu, Haderlein (2013)

Regulatory Summary

- **Toxic Substances Control Act (TSCA) passed in 1976**
 - TSCA Section 6(e) bans manufacture, processing, distribution in commerce and use of PCBs beginning in 1979
 - Required EPA to write regulations to implement TSCA
- **TSCA PCB Regulations Found at 40 CFR 761. Regs include:**
 - Options for PCB cleanup
 - Cleanup levels for high-occupancy use
 - Cleanup levels for groundwater
- **Cannot be delegated to the states**
 - When PCBs are found at a site, they are regulated by EPA under TSCA
 - At NVF EPA is regulating the PCB cleanup, while PADEP is overseeing other contaminants

PCB Remediation Waste Cleanup and Disposal Options



Risk-Based Disposal 761.61(c)

- Used when sampling, cleanup, or disposal differ from what is prescribed in 61(a) or (b)
- Must be used when groundwater, surface water, or sensitive environments are involved
- EPA must make no unreasonable risk finding
- No time limit for EPA approval, allows agency time to gather input from specialists
 - Toxicologist
 - Environmental Engineers/Scientists
 - Regulatory experts



NVF Proposed Cleanup Levels

- **TSCA Unrestricted Use Level** – 1 ppm total PCBs (residential standard)
- **Low Occupancy Areas** – Cleanup to less than 50 ppm
 - Less than the 100 ppm TSCA low-occupancy capped standard
 - Covered by cap
 - Specific land activity and use limitations
- **Risk-based Cleanup Areas** – Capped with additional restrictions
- **Groundwater Maximum Contaminant Level** - 0.5 µg/L

Environmental Covenants

- Places specific land activity and use limitations on the property; does not “approve” or “disapprove” a future use
- Recorded on Title of the property to ensure long term management; enforceable
- Example: TSCA Environmental Covenant would restrict areas with 100 ppm PCBs under a cap to “low-occupancy” use

Current Status

- **May 2025** - Rockhopper submitted Risk-Based Disposal Approval Application to EPA
- **July 2025** - EPA issued conditional approval of Application
 - This preliminarily approved the plan to address soil contamination
 - Required Rockhopper to sample groundwater wells. Sampling complete with no groundwater exceeding 0.5 µg/L
 - Requires Rockhopper to submit a Completion Report to EPA when construction of remedy is completed
- **Early 2026** – Rockhopper will submit a Final Application including the results of the groundwater sampling
 - EPA will review Final Application and make a preliminary approval decision
 - If the Final Application is preliminarily approved it will be made available for public notice, opening a 30-day public comment period

Resources

- **Code of Federal Regulations - 40 CFR Part 761**
<https://www.ecfr.gov/current/title-40/chapter-I/subchapter-R/part-761?toc=1>
- **EPA PCB Homepage**
<https://www.epa.gov/pcbs>
- **Comprehensive Q & A Manual - Commonly asked questions**
<https://www.epa.gov/pcbs/polychlorinated-biphenyl-pcb-question-and-answer-manual-and-response-comment-documents>
- **PCB Site Revitalization Guidance Under TSCA**
<https://www.epa.gov/pcbs/polychlorinated-biphenyl-pcb-site-revitalization-guidance-under-toxic-substances-control-act>



Region 3 PCB Coordinator

Amanda Michel

US EPA Region 3

Land, Chemicals and Redevelopment Division

michel.amanda@epa.gov

215-814-2709