

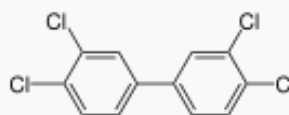
Spokane River PCB TMDLs

November 30, 2022 Update

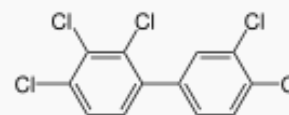


PCB Human Health Impacts

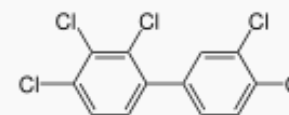
- Probable carcinogens
- Immune system impacts
- Reproductive system impacts
- Nervous system impacts
- Endocrine system impacts
- **Highly bioaccumulative**
- **Environmentally persistent**



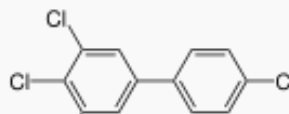
PCB 77



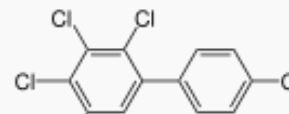
PCB 105



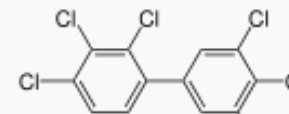
PCB 156



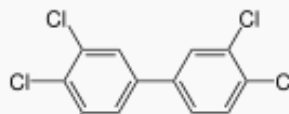
PCB 81



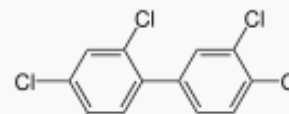
PCB 114



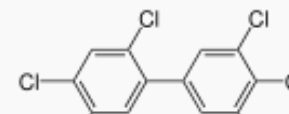
PCB 157



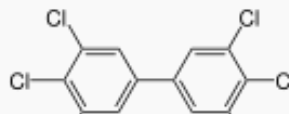
PCB 126



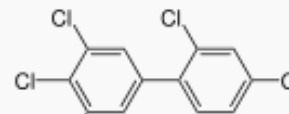
PCB 118



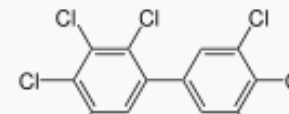
PCB 167



PCB 169



PCB 123



PCB 189



PCB Pollution Sources

- Though U.S. manufacture was banned in 1979, PCBs were widely used in...
 - Electrical, heat transfer, and hydraulic equipment
 - Plasticizers in paints, plastics, and rubber products
 - Pigments, dyes, and carbonless copy paper
 - Fluorescent light ballasts, caulking, and floor finishes
 - MANY other industrial applications
- *Though regulated, many goods are still allowed to contain PCB concentrations measured in **parts per million**, while applicable water quality standards are measured in **parts per quadrillion***



Project Overview

- EPA is developing Spokane River PCB TMDLs as a result of a litigation consent decree
 - U.S. EPA
 - Spokane County, Kaiser Aluminum, Washington Department of Ecology
 - Sierra Club, Center for Environmental Law and Policy
 - Spokane Tribe of Indians
- TMDL implementation plan will be developed by Washington Department of Ecology





Consent Decree Provisions

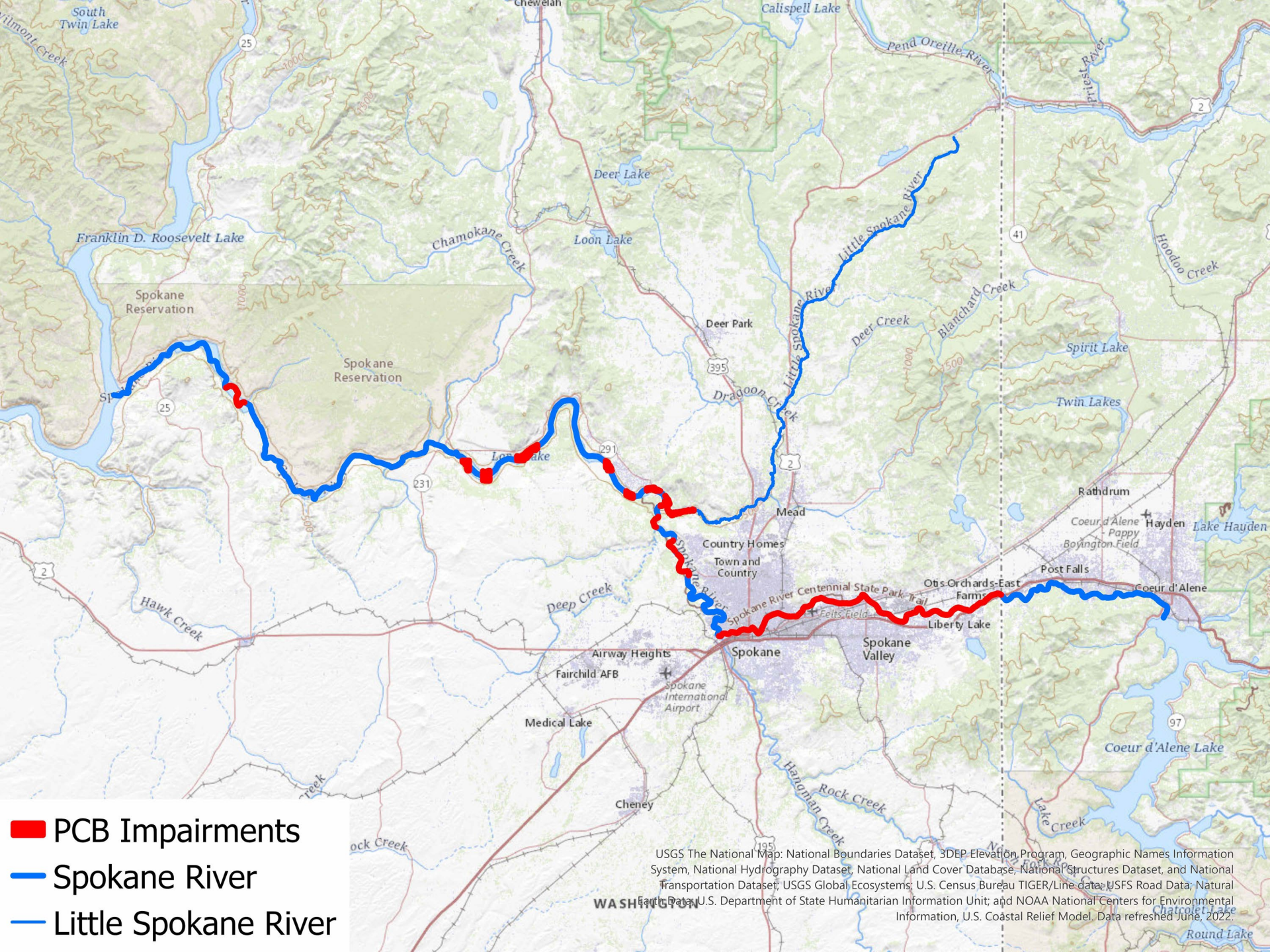
- Address PCB-impaired waters of the Spokane and Little Spokane Rivers
 - Consent decree identifies 19 assessment units listed as Category 5 for PCBs in 2012 Washington 303(d) list
 - 2014-2018 Washington 303(d) list identifies 20 Category 5 assessment units
- Status reports to court every 180 days
 - First report filed August 2022, next report due February 2023
- ***Final TMDLs to be issued/approved no later than September 30, 2024***

September						2024
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					



Project Extent

- Washington Department of Ecology Water Resource Inventory Areas
 - 54 Lower Spokane, 55 Little Spokane, 57 Middle Spokane
- Spokane River
 - Confluence with Columbia River to Washington/Idaho border
 - 19 assessment units listed as Category 5 for PCBs
- Little Spokane River
 - Confluence with Spokane River to headwaters
 - 1 assessment unit listed as Category 5 for PCBs
- ***TMDLs will address all Spokane and Little Spokane River assessment units listed as Category 5 for PCBs***



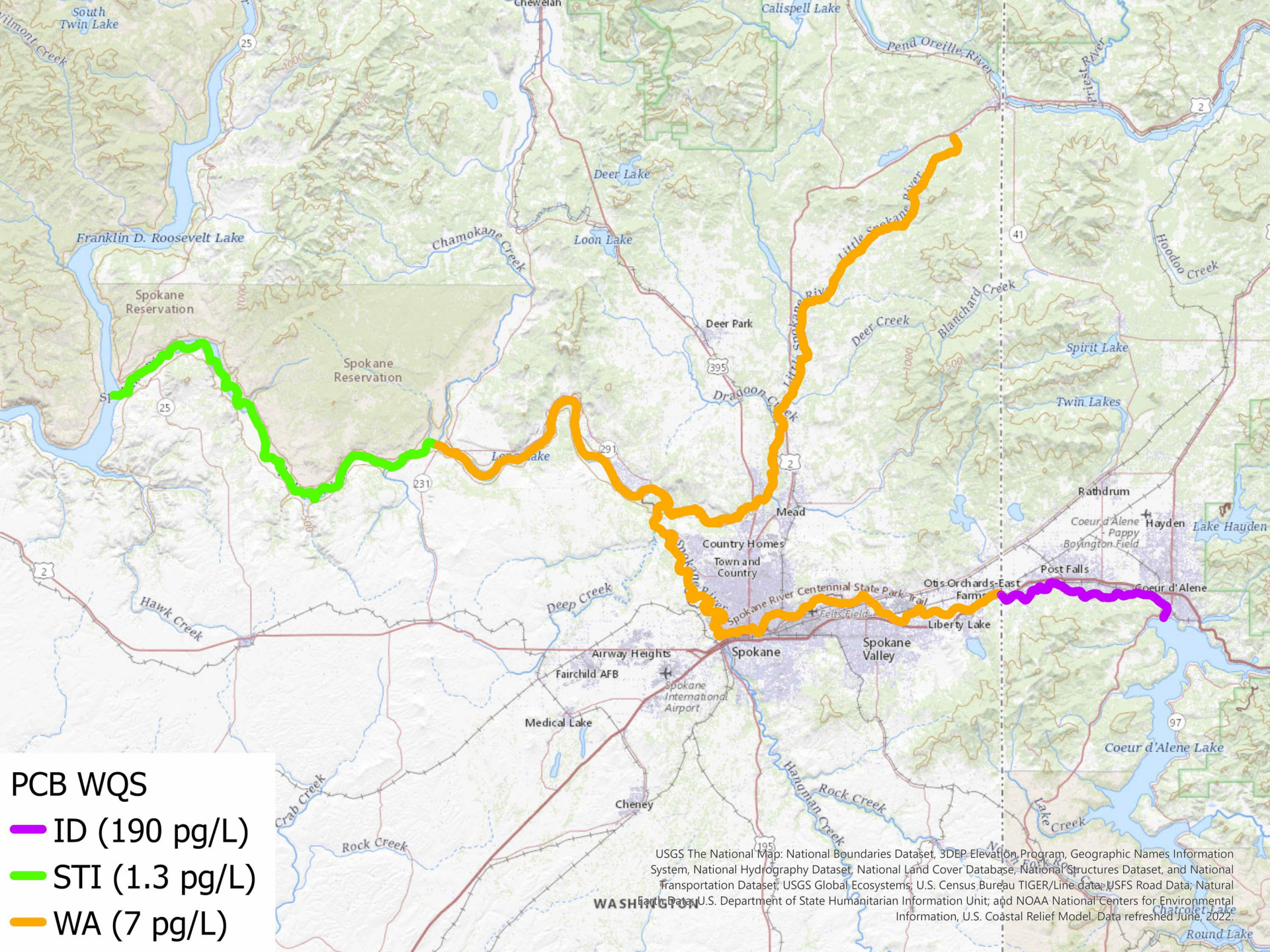
- PCB Impairments
- Spokane River
- Little Spokane River

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



Applicable PCB Water Quality Standards

- Spokane Tribe of Indians = 1.3 pg/L
 - Columbia River to Spokane River mile ≈ 35.5
- Washington = 7 pg/L
 - Spokane River mile ≈ 35.5 to ≈ 99.5
 - Entirety of Little Spokane River (≈ 52 miles long)
- Idaho = 190 pg/L
 - Spokane River mile ≈ 99.5 to Coeur d'Alene Lake
- *Approvable TMDLs must...*
 - ***Achieve and maintain all applicable water quality standards***
 - ***Be protective of applicable downstream water quality standards***



PCB WQS

- █ ID (190 pg/L)
- █ STI (1.3 pg/L)
- █ WA (7 pg/L)

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



Anticipated Project Schedule

Year	2022				2023				2024		
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Ancillary GIS and hydrology analysis	█	█	█								
Collate PCB monitoring data*		█	█	█	█	█	█				
Develop and refine technical approach			█	█	█						
PCB monitoring data analysis			█	█	█	█	█	█			
Public/stakeholder outreach			█	█	█	█	█	█	█	█	█
Issue public comment draft of TMDLs										█	
Respond to public comments										█	█
Issue final approved TMDLs											█

*possible 2023 Q1-Q3 extension to accommodate recently collected PCB data



Additional Project Information

- Spokane River PCB TMDLs project website
 - <https://www.epa.gov/tmdl/spokane-river-pcb-tmdls>
 - Background information, PCB and TMDL resources, project updates
 - Interested parties can also join EPA's email list for project updates
- Comments and Questions
 - Please contact Gunnar Johnson
 - Johnson.Gunnar@epa.gov
 - 206-553-2114
 - U.S. EPA, 1200 Sixth Avenue, Suite 155 (19-A02), Seattle, WA, 98101