

Sources and Pathways of PCB-11: Scoping of Phase II

**TTWG Meeting
November 3, 2021**

Sources and Pathways of PCB-11: Scoping of Phase II Objective

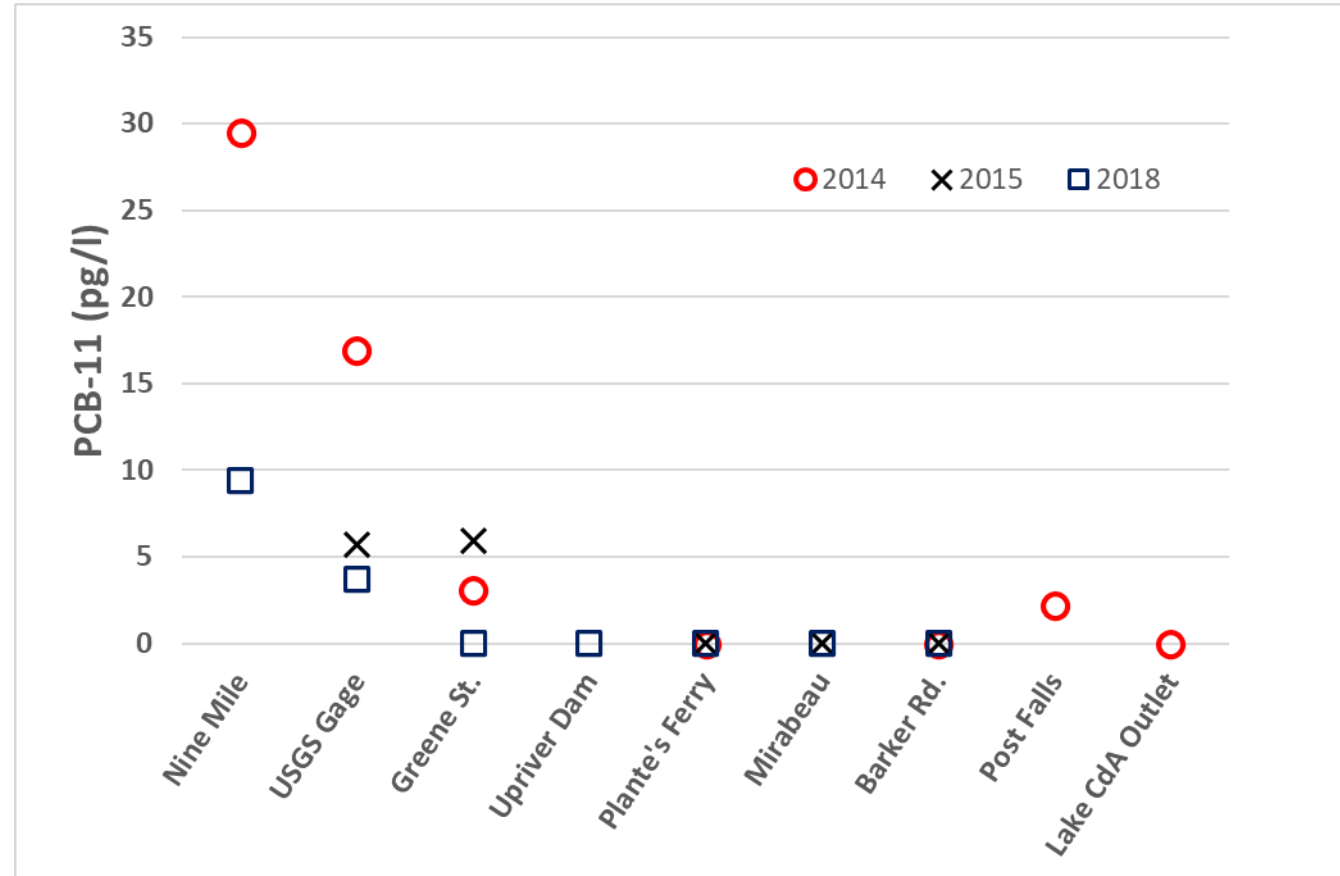
- Mass balance on observed PCB-11 loads strongly suggests presence of previously unidentified sources
- Next step is to develop scope(s) of work to help identify sources and pathways
- What potential activities do we develop scopes for?

Sources and Pathways of PCB-11: Scoping of Phase II Objective

- Overview for Today's TTWG
 - Summarize source categories and investigation pathways suggested at the TSCA workgroup and SRRTTF meetings
 - Solicit TTWG input on additional source categories/investigations of interest
 - Obtain consensus on the specific source categories/investigations for which scopes of work will be developed.
- Early December TTWG Meeting
 - Review Scopes of Work and Budget for agreed upon investigations
 - Obtain consensus on which specific scopes should be brought to the Dec SRRTTF with a recommendation to approve funding and implementation

Sources and Pathways of PCB-11: Scoping of Phase II Background

- Consistent increase in PCB-11 concentrations across surveys as the river passes through Spokane



Sources and Pathways of PCB-11: Scoping of Phase II Background

- Mass balance results suggest the presence of unexplained PCB-11 load

Magnitude (mg/day) of Unexplained PCB-11 Load by River Reach and Year

Time Period	River Reach								Total
	Lake CdA to Post Falls	Post Falls to Barker	Barker to Mirabeau	Mirabeau to Plante's Ferry	Plante's Ferry to Upriver	Upriver to Greene	Greene to USGS Gage	USGS Gage to Nine Mile	
2014	2.8	-3.3	-0.94		40.7		-	-	40.4
2015	-	-	0	0	6.2		-1.9	-	4.3
2018	-	-	0	0	-4.2	-1.2	10.7	19.4	24.7

Potential Source Pathways

- Stormwater loads via groundwater
- Atmospheric loading
- PCBs in fertilizer
- Breakdown of higher-level congeners to PCB-11
- Leaching from in situ sources
- Others?

Potential Investigations: Which Do We Scope?

- Stormwater loads via groundwater
 - Estimate PCB-11 loading to dry wells
 - Investigate transport pathways
 - Reconcile observed non-detects in existing groundwater data
- Atmospheric loading
 - Review prior studies, including waste-to-energy plant impact
- PCBs in fertilizer
 - Review Gonzaga data
- Breakdown of higher-level congeners
 - Investigate degradation rates
 - Calculate rate of PCB-11 production
- Leaching from in situ sources
 - Investigate leaching rates
 - Calculate mass of in situ material required to generate necessary load
- More robust sampling
 - Is synoptic survey planned for 2022 sufficient?
- Others?