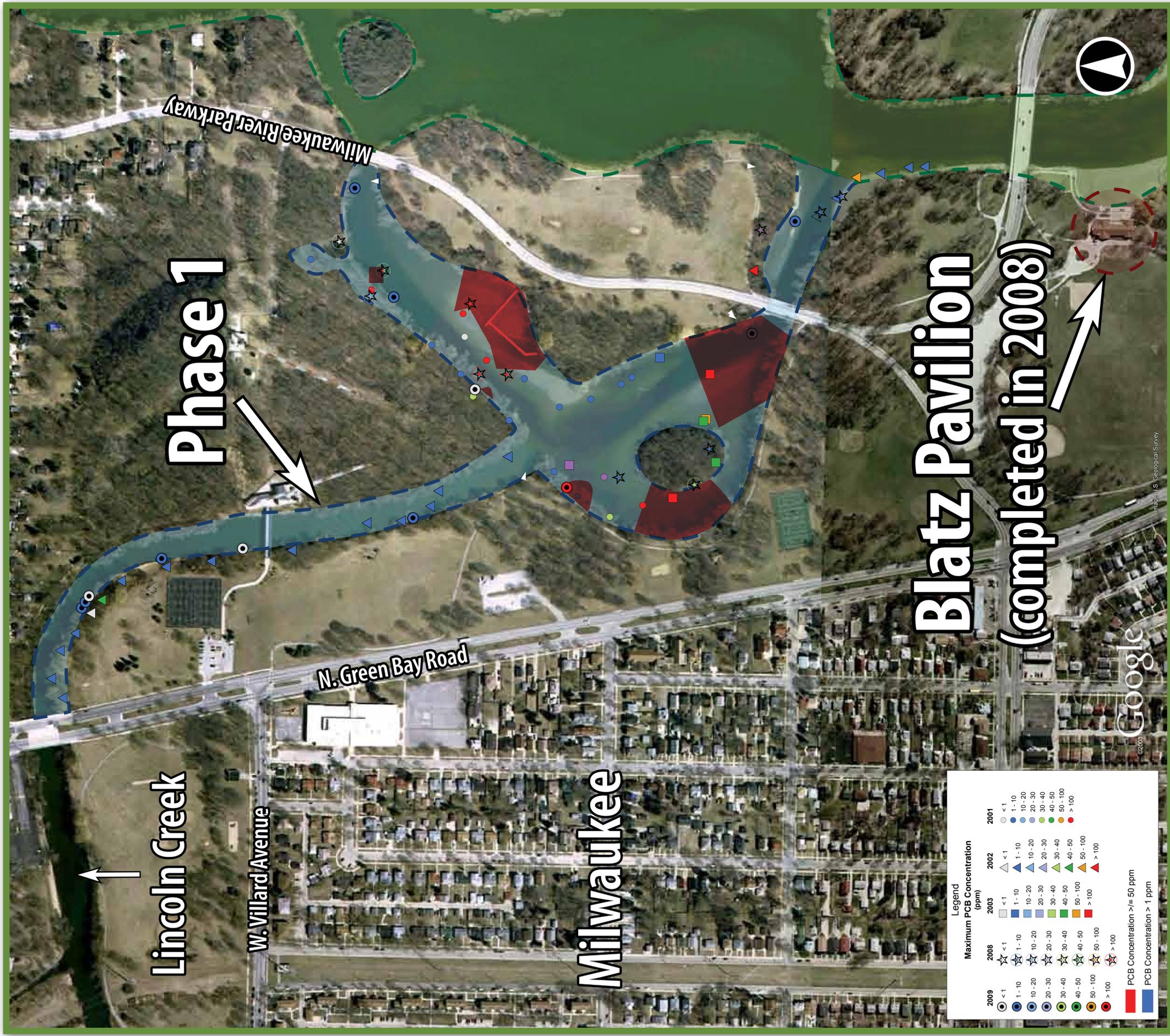


Lincoln Park, Milwaukee Great Lakes Legacy Act Project



PCB Data



Project Objectives

Environmental Cleanup

- Use best management practices
- Remove contaminated sediments that impact ecological and human health
- Minimize the disruption to the local community and park during the cleanup
- Improve habitat through restoration



What's Next?

Environmental Cleanup

- Design the selected cleanup plan
- Evaluate sediment PCB concentrations in Phase 2 areas
- Phase 1 sediment cleanup – beginning in 2010
- Phase 1 habitat restoration – 2010 - 2011



Blatz Pavilion Sediment Cleanup – 2008



Blatz Lagoon; early in the project with the Milwaukee River lowered. The exposed mudflat with PCB-contaminated sediment targeted for removal. Excavator is building an access road for heavy equipment.



Blatz Lagoon; An excavator is carefully scraping targeted layer for special handling and disposal. Note the surveyors positioning the bucket and verifying removal. Removal cells marked with paint and survey stakes.



Blatz Lagoon Restoration. All of the PCB-contaminated sediment has been removed, a clean sand layer is being placed over the gravel fill to restore the contours of the lagoon and provide a clean bottom.



Blatz Lagoon after cleanup. The access road and heavy equipment have been removed and the park lawn restored.

Lincoln Park Area in 1937



Cleanup Alternatives

Alternative	Description	Estimated Volume of PCB Contaminated Sediment Removed (Cubic Yards)	Estimated Mass of PCBs Removed (Pounds)	Estimated Cost (Million \$)
1. No Action	No additional remedial actions would be conducted. This alternative is for comparisons only.	0	0	\$0.0
2. Monitored Natural Recovery	No additional remedial actions would be conducted. Periodic monitoring for water column, sediment and fish tissue conducted. Natural PCB degradation not likely to occur within a reasonable time period because of persistence of PCBs. Costs are the assumed monitoring cost for 30 years.	0	0	\$2.2
3. Containment*	Minimal removal of sediment to provide room for protective cap. Cap designed to provide physical isolation of sediment contaminants. Stabilization would prevent resuspension and transport of sediment.	450	91	\$6.5
4. In Situ Treatment*	Similar to Alternative 3 but with the addition of a reactive cap to decrease PCB contamination over time.	450	91	\$11.5
5. Partial Excavation & Cap	Excavate all sediments with PCB concentration greater than or equal to 50 parts per million (ppm). Disposal in an out-of-state landfill. Cap similar to Alternative 3.	14,000	2,829	\$11.2
Recommended Alternative				
6. Excavation & Off-Site Disposal	Remove all sediments with PCB concentrations greater than or equal to 1 ppm. Sediments with concentrations greater than 50 ppm will be disposed of in an out-of-state landfill.	98,000	4,075	\$20.2
7. Excavation, Ex Situ Treatment & Off-Site Disposal	Similar to Alternative 6, but with treatment to separate clean sand from sediment for potential reuse. If selected, the viability of this alternative would need to be verified by additional testing and evaluation.	98,000	4,075	\$20.3

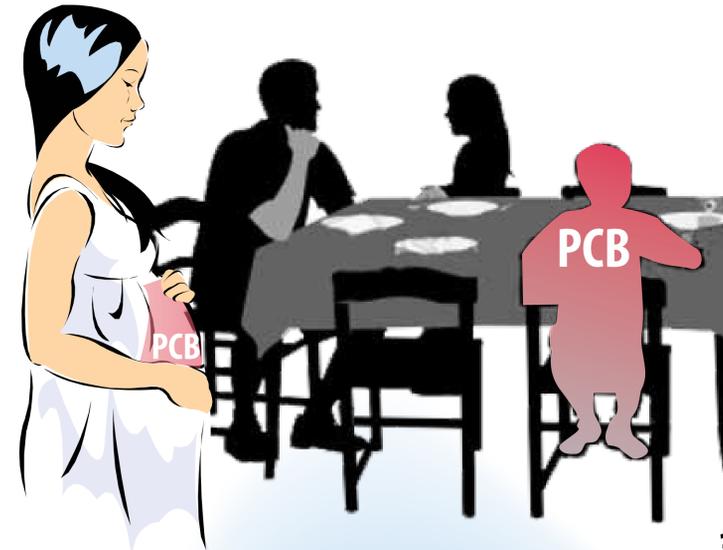
*Clean up alternative not viable. Leaving PCBs greater than 50 ppm may violate disposal regulations

How Do PCBs Get Into the Fish I Eat?



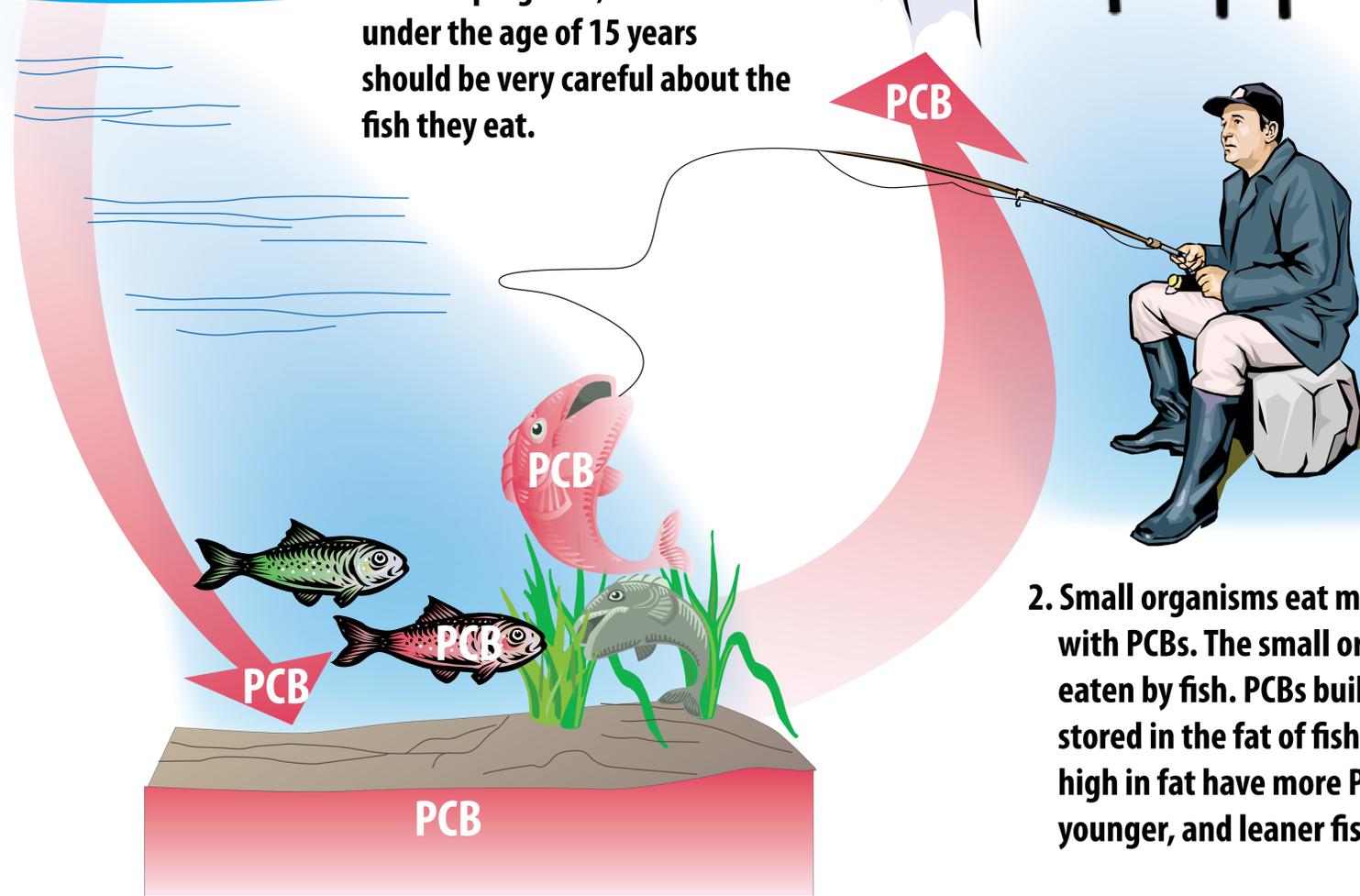
1. Polychlorinated Biphenyls (PCBs) are chemicals that can be harmful to children and unborn babies. These chemicals were released into the environment from industrial processes. PCBs still remain in the environment.

4. PCBs can especially be harmful to children and unborn babies. A woman can pass PCBs onto her baby during pregnancy and breast-feeding. PCBs in children's bodies can cause slower development and learning disabilities. Women who are pregnant or who become pregnant, and children under the age of 15 years should be very careful about the fish they eat.



3. People who eat a lot of fish containing PCBs store these PCBs in their body fat for many years.

2. Small organisms eat mud contaminated with PCBs. The small organisms are then eaten by fish. PCBs build up and are stored in the fat of fish. Larger, older fish high in fat have more PCBs than smaller, younger, and leaner fish.



The Great Lakes Legacy Act



Goal:

Accelerate the pace of sediment remediation in U.S. Areas of Concern (AOCs)

Mechanism:

Use partnerships as an innovative approach to conducting sediment remediation

