

## The Kalamazoo River and PCBs: A Public Education Forum

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7 – 9 pm

Background on PCB pollution of the  
Kalamazoo River, Superfund, & the  
cleanup to date

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### Rivers serve multiple purposes

- Water supply
- Commerce & transportation
- Sanitation / wastewater disposal
- Water power
- Recreation:
  - Fishing
  - Swimming
  - Boating

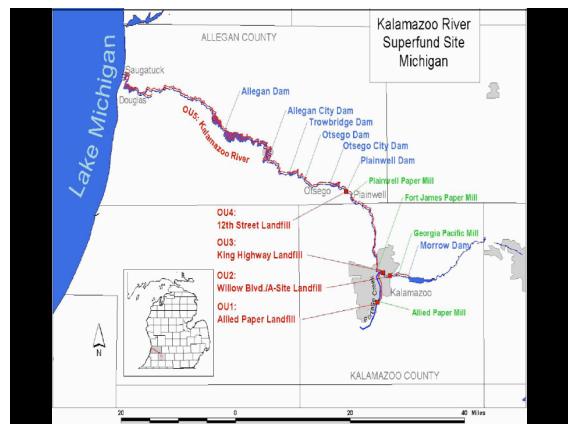
### The Kalamazoo River PCBs

- Paper mills located along the river for several reasons, including wastewater disposal
- In the 1950's to early 70's, paper-mill recycling and de-inking of NCR paper (No Carbon Required) released PCBs, which were volatile carrier fluids used in micro-bubbles on the colored copies.



### PCB contamination

- PCBs are chemicals regulated by the EPA because they are harmful to living things (Chuck Ide will tell you more about them.)
- The Kalamazoo River is the 4<sup>th</sup> largest source of PCBs to Lake Michigan. The largest source is volatilization of PCBs which are then rained out of the air into the lake.



## Who cares about PCBs in the river?

- We all should. Our environment is degraded by this contaminant.
- The threat to human health & the environment from PCBs in the river comes from eating fish. Eagles, mink & people eat fish. Those people include poor families, migrant workers living around Fennville, & Hmong migrants in Saugatuck. Fish PCB levels are dropping too slowly to just leave the PCBs in the river.

## Kalamazoo River is a Superfund site

- In 1990, local politicians got EPA to evaluate the Kalamazoo River as a potential Superfund site. The risk level was high enough to cause the EPA to list it as a Superfund site on the National Priorities List.
- What does it mean to be a Superfund site?

## What is Superfund / CERCLA?

- The CERCLA program was created by the US Congress in 1980 in response to incidents like "Love Canal" to spur the cleanup of "orphan" contaminated sites.
- Cleanup was to be funded by the Potentially Responsible Parties (PRPs). Seed money came from a "Superfund" based on a tax on petroleum and 42 chemicals.

## What is Superfund like now?

- Superfund taxes expired in 1995 and were never renewed. Superfund is busted.
- Any money now allocated to the EPA's Superfund program comes from general funds and from the PRPs.
- General funds are hard to get, especially since the 1994 Republican takeover of Congress. The EPA is suffering. Cleanup funding now must come from the PRPs.

## Cleanup of PCB contamination

- There are three options for cleaning up the PCB-contaminated sediments in the river listed from most common to least common:
- Monitored natural attenuation = do nothing
- Digging out or dredging the sediments and putting them somewhere else
- Capping the sediments in place, while cutting off the food chain from PCB contamination

## History of Kalamazoo River Superfund site, part 1

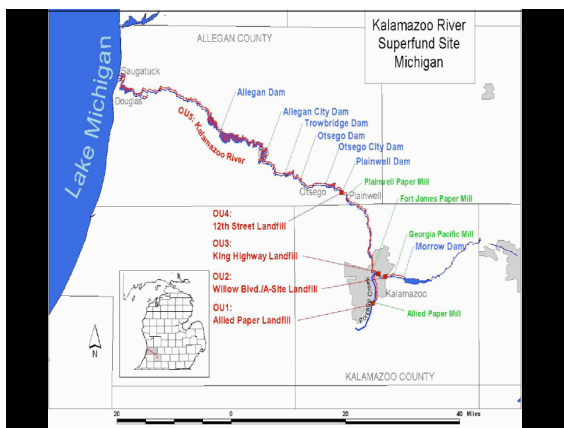
- Listed in 1990, with Michigan DEQ responsible for pushing the cleanup
- Limited site characterization occurred
- Contaminated sediments at Bryant Mill Pond in Portage Creek were removed in an Emergency Response Action in 1998-1999, and put in the existing Allied Paper landfill on site.

## History of Kalamazoo River Superfund site, part 2

- The lack of cleanup progress with Michigan DEQ leading out caused Michigan in 2001 to request EPA take the lead.
- EPA did a sampling round in Otsego and arranged for modeling of the river
- Little cleanup progress; EPA hired a mediator to facilitate private negotiations with the PRPs. 30 months later a settlement reached.

## The settlement = stage 1 cleanup

- PRPs will pay \$21 million to dig out contaminated sediments in the 1.5 miles upstream of the former Plainwell Dam (in Otsego) and truck that waste to the Allied Paper landfill in Kalamazoo. Then what remains of the dam will be demolished.
- PRPs will pay \$15 million to study other PCB-contaminated spots in the river.



## More on the settlement

- The wastes trucked to Kalamazoo are about 1.3% of the total PCBs in the river.
- They propose to stack up to 40 feet of contaminated soil on the existing landfill.
- This landfill leaked contaminated water after the 1999 Emergency Response. It apparently is currently in compliance.
- How will it handle an additional 40 ft of soil?

## Pros & cons on the landfill

- This landfill has been in place for ~50 yrs without causing groundwater contamination
- The only other available site is in Detroit
- Residents near the landfill will face increased heavy truck traffic. They will be exposed to PCBs adsorbed on construction site dust and volatilized from soils.
- The 40 ft of soil will change the landfill's water pressure distribution & maybe the flow pattern.

## What's next for the cleanup?

- About 98.7% of the PCBs will remain in the river & floodplain downstream of the dam, most of it (~80%) in Lake Allegan.
- Downstream river reaches will be cleaned up later following more negotiations.
- If the additional PCBs will be dredged or dug out, where will they be dumped?
- It will take many years to site and approve a PCB landfill near Allegan to receive the remaining 98.7%. Only the PRPs would do this. Meanwhile, no further cleanup?

## Are there alternatives?

- If we can identify PCB hot spots in the sediments and stream bank, we can cap or reinforce them to keep them from getting in the food chain. Then we don't have to find a place to dump them. I am trying to show the effectiveness of using geotextiles for capping. Dan Cassidy is developing chemical oxidants to break down PCBs in place. We hope to get funding to test these alternatives to dumping.

## Our river should be clean!

