

10 Mile Drain Remediation

Summary of the Clean-up
efforts for the 10 Mile Drain and
Lange Street canals

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Completed Activities

- EPA's removal action
 - Except some seawall work
- Development of Maintenance and Monitoring Plan
- County Dredging of the canal
 - Except some boat wells & seawall repairs



Ongoing Concerns

- Elevated levels of PCBs still exist...
 - In the storm water discharging from the drain.
 - In the sediments that have accumulated in the sediment trap.
 - In the canal near the drain outlet.
- The “source” of the contamination in the drain is unknown



Planned Activities

Element 1. Source Investigation

– Through July 2004

Element 2. End of Pipe Cleanout

– Early 2004

Element 3. Quarterly Monitoring

– Through March 2005

Element 4. Final Drain and Canal Remediation



Element 1.

Source Investigation

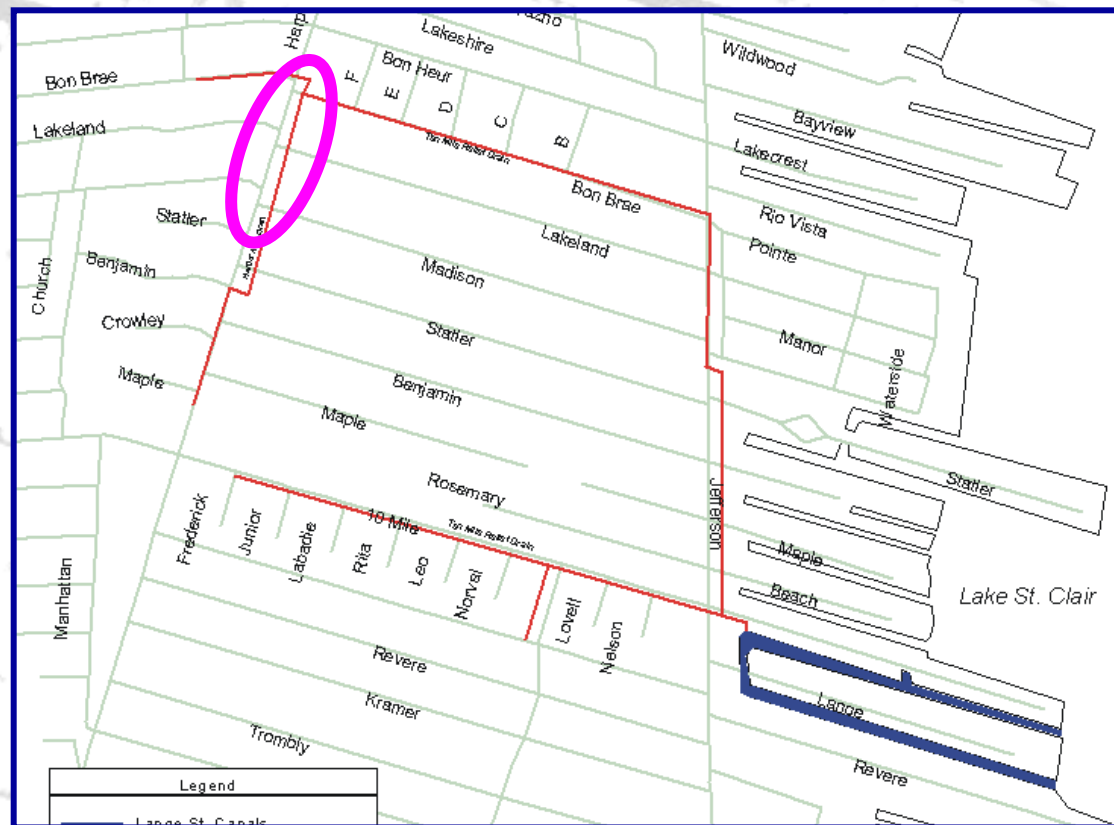
Objective: Identify what section of the pipe the contamination is coming from and possibly the source

- Conduct an Environmental Assessment
 - Review data collected by the City and EPA
 - Review Sanborn maps
 - Review aerial photographs
 - Review property records



Element 1. Source Investigation

- Collect additional storm water samples to narrow down “hot spot”



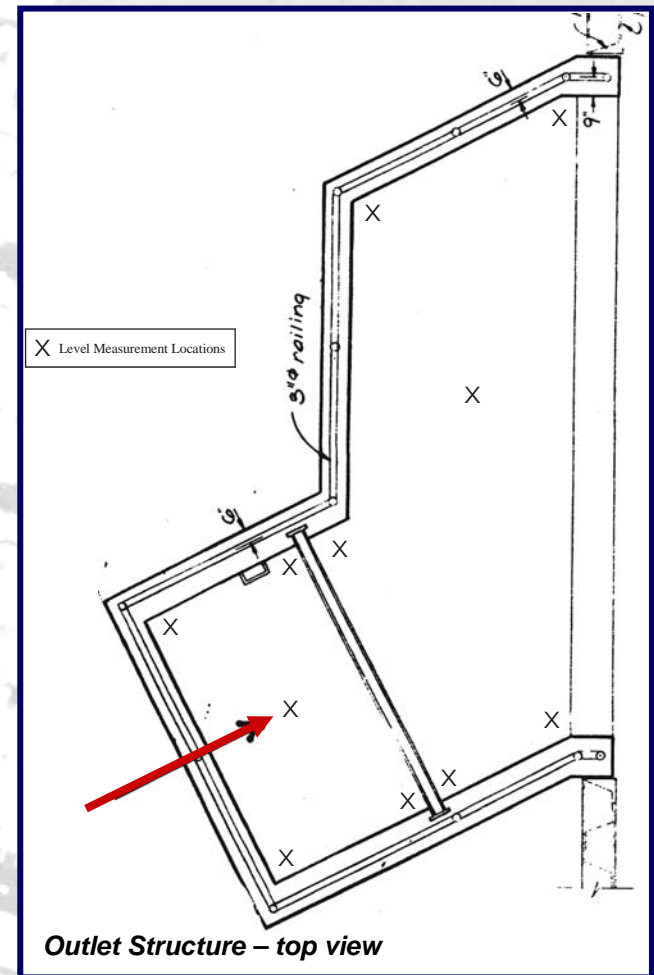
Element 2.

End of Pipe Cleanout

Objective: Remove the sediment from the outlet to 10 Mile Rd. & Jefferson Ave.

Construction Process:

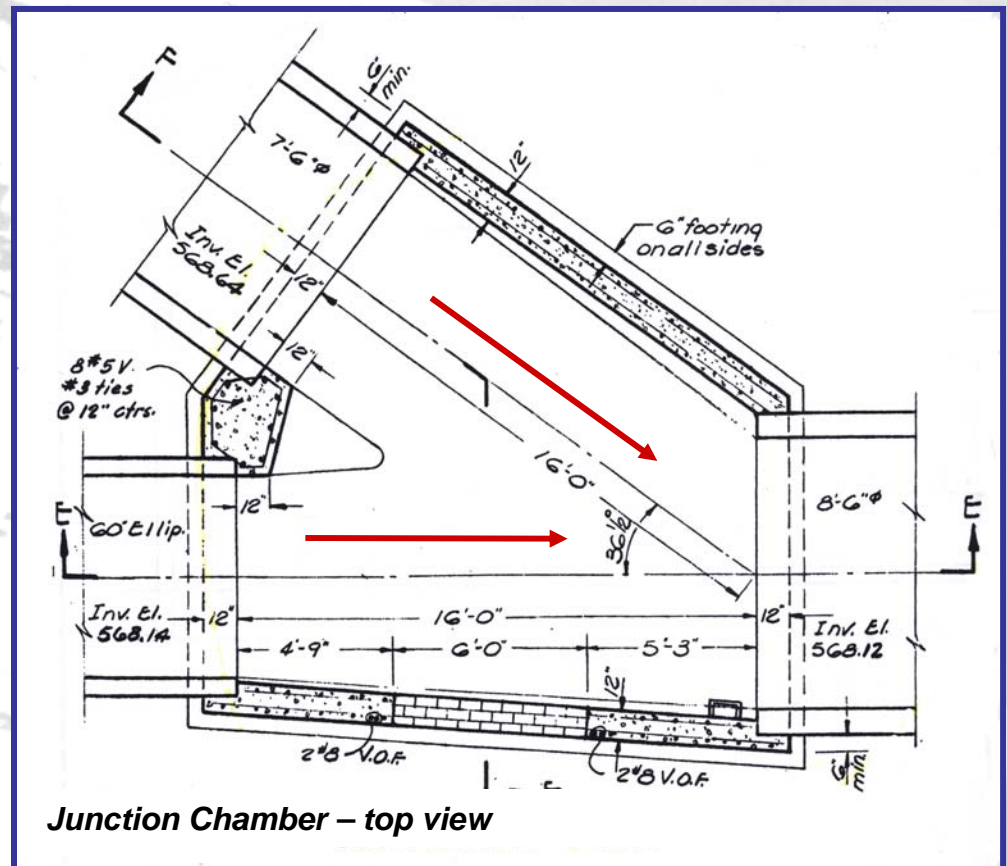
- Measure the level of sediment.
- Install a steel plate to isolate the cleanout area from the lake.
- Install silt curtains (2) and oil boom in the canal.



Element 2. End of Pipe Cleanout

Construction Process
(cont.):

- Install two inflatable plugs (60" and 90") in the drain to isolate the the cleanout area.

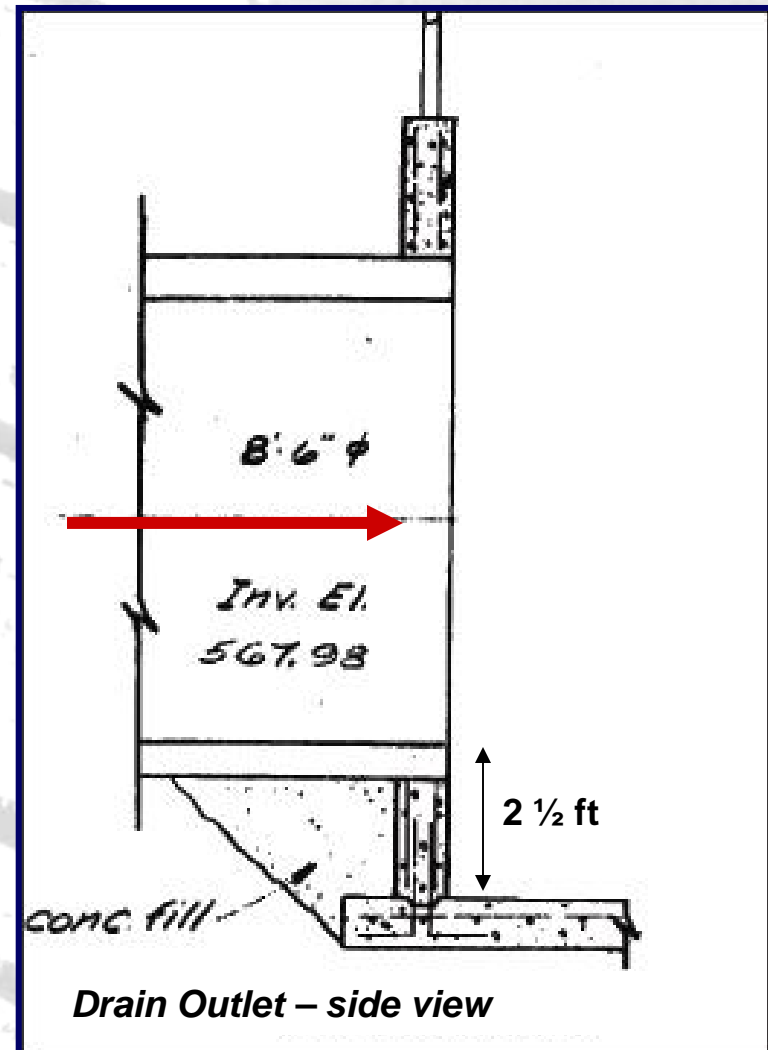


Element 2.

End of Pipe Cleanout

Construction Process (cont.)

- Dewater the cleanout area and monitor for turbidity.
- The contractor will leave 2½ ft. of water in the outlet structure to minimize disturbance of the sediment.



Element 2.

End of Pipe Cleanout

Construction Process (cont.):

- Videotape the cleanout area to record the volume of sediment.
- Vacuum out the sediments and remaining water from the drain and transfer them to dewatering roll-off boxes.
- Heat the roll-off boxes inside a temporary structure to allow the sediments to dewater.
- Videotape the cleanout area again and review the tape to ensure the sediments have been removed.
- Refill the drain and remove the plugs and the steel plate. Store the steel plate for use in future maintenance operations as required.
- Vacuum the liquid from the roll-off boxes for transport by liquid waste haulers.
- Haul the solid waste to Wayne Disposal located in Belleville and the liquid waste to Comprehensive Environmental Services located in Dearborn, Michigan.



Element 3.

Quarterly Monitoring

Objectives: Determine 1) if the levels of PCBs are changing over time, 2) the rate of sediment accumulation, and 3) make recommendations for additional remediation measures, if necessary

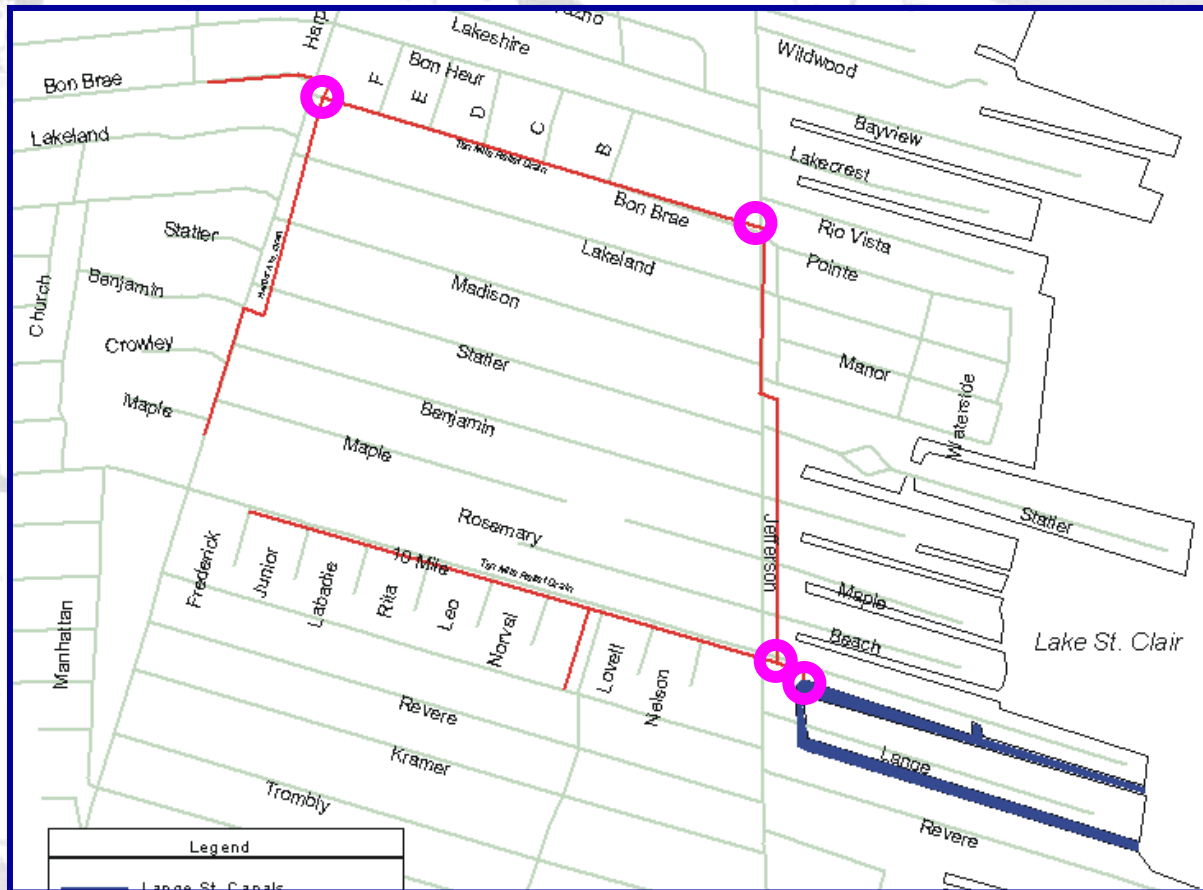
Monitoring Tasks:

- Quarterly sediment level monitoring in the sediment trap.
 - Measurements will be taken at 10 locations to determine the rate at which sediment is accumulating over 12 months.
- Continuous flow monitoring in the drain.
 - A flow meter will be installed while the drain is dewatered.
 - Used to determine the flow conditions at the time of sampling.



Element 3. Quarterly Monitoring

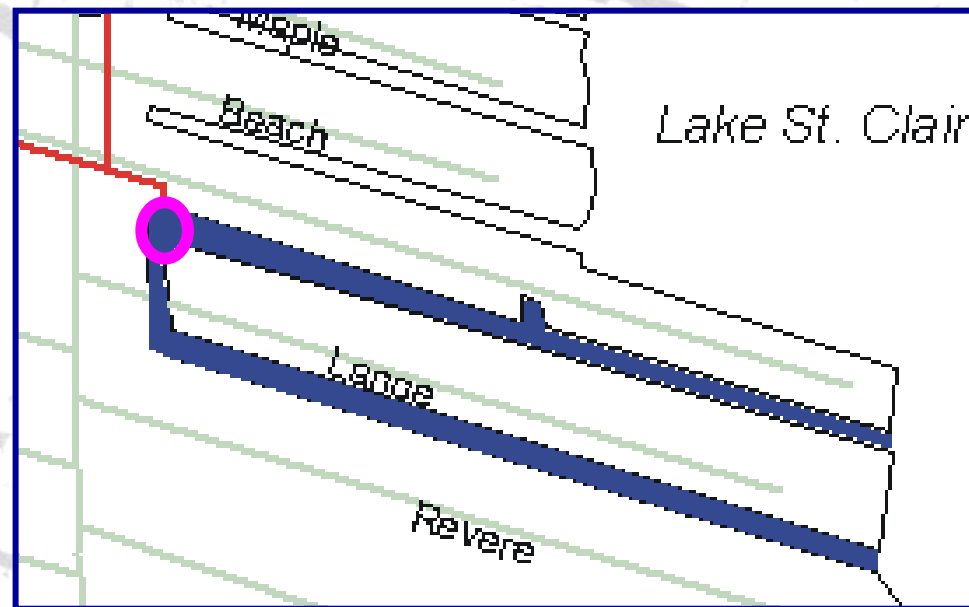
- Quarterly storm water sampling for PCBs during **dry & wet** weather conditions at four locations.



Element 3.

Quarterly Monitoring

- Quarterly sediment sampling at the sediment trap.
- Sediment sampling at four locations in the canal during the last quarter.



The MDEQ has stated that they will also be collecting samples from the canal. The scope and timing of this effort is unknown at this time.



Element 4.

Final Drain and Canal Clean-up

- Drain Clean-up
 - Review the monitoring data with EPA & DEQ – Spring 2005.
 - If further actions are needed, review remediation options.
- Canal Clean-up
 - Dredging contractor will address outlet area when the boat wells are completed – Spring 2004.
 - This may be a temporary solution, but it is cost effective since the contractor is already on-site.
 - Review canal data collected by the Public Works Office and the MDEQ to determine if additional remediation is necessary.



Questions?



USGS

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