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JENNIFER M. GRANHOLM  
GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF COMMUNITY HEALTH  
LANSING

JANET OLSZEWSKI  
DIRECTOR

March 10, 2006

Ken Podolski, City Manager  
City of St. Clair Shores  
27600 Jefferson Circle Drive  
St. Clair Shores, MI 48081-2093

Dear Mr. Podolski:

As follow-up to the town hall meeting conducted March 1, 2006 for the Ten Mile Drain PCB Contamination in St. Clair Shores, I am supplying further detail to my responses to community health concerns raised at that meeting. Please place the PDF version on the City website and a hardcopy in the public repository at the library so that citizens can access this information.

If there are further public health concerns regarding the PCB contamination, please contact me at 1-800-648-6942 or [bushcr@michigan.gov](mailto:bushcr@michigan.gov). You can also contact the Macomb County Health Department with any health questions. Thank you for your assistance.

Sincerely,

*Christina Rose Bush*

Christina Bush, Toxicologist  
Toxicology and Response Section  
Division of Environmental and Occupational Epidemiology  
Bureau of Epidemiology

Attachment

Cc: Thomas Kalkofen, Macomb County Health Department  
Dr. Kevin Lokar, Macomb County Health Department  
Cole Shoemaker, Macomb County Health Department  
Jeff Kimble, U.S. Environmental Protection Agency  
Richard Berak, Michigan Department of Environmental Quality

**Michigan Department of Community Health  
Response to Community Health Concerns Voiced at 3/1/06  
Ten Mile Drain Town Hall Meeting  
St. Clair Shores, Michigan**

**1. Residents have concerns about exposure to the PCBs. Should residents move out of their homes during this next clean-up? Should residents move away?**

Any exposure that people might have to the PCBs in the Ten Mile Drain area would be brief and infrequent and is not expected to result in adverse health effects.

▶ Exposure to PCBs within the sewer system is not expected to occur because residents do not have access to the sewers and public works employees would be wearing personal protective equipment when they enter the sewers.

▶ Sump pump back-ups or drain “snaking” may bring some contaminated sludge into residential basements, but whoever cleans up the sludge would be exposed only briefly, if at all, to PCBs in the air and likely wearing rubber gloves and rubber boots to prevent skin contact.

▶ The “surficial” (near-surface) soils that are going to be removed, because their concentration exceeds the MDEQ direct contact criterion, were found under the sod (grass). Sod provides a fair amount of protection from direct contact with soils. EPA plans to start excavating in April. If residents know that the areas to be excavated (sampling locations 017, 016, and 030) become muddy in the spring, they should avoid these areas until after the excavation is completed.

It is not necessary to move out of your home during the planned soil excavation and sewer liner placement. These actions should not release harmful levels of PCBs to the air (as vapors or as dust) nor excess contaminated sediment to the canals. The work should move along quickly (proposed total time is 45 days) so that you are minimally inconvenienced by noise and extra traffic.

The EPA and MDEQ have expressed their interest in a complete remediation of the contamination. As they seek ways and means of making a comprehensive clean-up happen, the measures taken now should prevent intermediate-term (at least 10 years) recontamination of the sewer and canals. MDCH and the Macomb County Health Department do not believe that sufficient exposure is occurring (if any is occurring at all) to cause you harm. Therefore, the health agencies do not feel that you need to move away.

**2. Could children who dig in the soil where the “surficial” concentrations were higher than the MDEQ criterion, be exposed to PCBs?**

The areas where MDEQ found PCBs in surficial soils above the agency’s criterion have been identified and will be excavated and then filled with clean soil. This action should be taking place this spring, possibly extending into summer, and will remove the potential for exposure to the contaminated soil in these areas.

It is possible that, in the past, children or adults could have dug in these areas and been exposed to PCBs. However, based on what we know about the concentrations

now, it appears that the distribution of PCBs in the soil is spotty, with higher concentrations generally *not* near the surface. The highest concentration of PCBs found in surficial soils, 822 ppm, occurred at a spot where there had reportedly been a transformer fire. Electrical transformers contain PCBs, and a fire involving a transformer would release PCBs in the immediate vicinity.

**3. Could garden produce take up the contamination into the edible portion of the plant?**

Although the chemical properties of PCBs indicate that they preferentially accumulate in the fat of an organism, the chemicals can accumulate in plants. Uptake is less in root vegetables, because PCBs generally remain attached to the soil particles. Above-ground vegetables and fruits will not accumulate PCBs so much from the soil as they might from the air (as vapors). Studies on plants grown in PCB-contaminated soils estimate that uptake is less than 2 percent. It is likely that any vapors arising from the PCBs in the Ten Mile Drain area are substantially contained within the sewer system or deep soils and are minimally, if at all, present in the air in the residential areas.

Some plants may take up metals from soil. The earlier soil investigation in St. Clair Shores along the Lange and Revere canals indicated that some residential yards had concentrations of arsenic above state "background" (what would normally be expected, on the average, throughout the state). Data from experiments in which various vegetables and fruits were grown on arsenic-containing soil indicated a small amount of uptake into the plants. The slight increase in arsenic in the plant material, however, is not expected to negatively impact your health if you eat the produce.

**4. If people want to get a medical test to determine if they have been exposed, where should they go?**

Some people expressed concern regarding exposure to the PCBs and wanted to have a medical test to determine what amount of PCBs might be in their bodies. If you want to get a medical test, you should confer with your doctor first and discuss all possible exposures to PCBs that you may have had and how you were exposed.

► Although a medical test might indicate that you have been exposed to PCBs, and maybe to a greater extent than the general population, the test cannot predict whether you will become sick as a result of that exposure.

The most common way a person is exposed to PCBs is by eating fish that have PCBs in their fat. If these fish have not been appropriately cleaned and cooked so that the fat is removed from the fillet that is eaten, then PCBs likely will be taken up by your body when you eat the fish. (Please refer to the MDCH Michigan Family Fish Consumption Guide on our website [[www.michigan.gov/mdch](http://www.michigan.gov/mdch)] to see which fish are of concern in Lake St. Clair and area rivers and lakes.) Other exposures to PCBs can occur via handling contaminated soil or sediment, being near an electrical transformer that is burning or explodes, or through your job (if you work with capacitors, transformers, or other PCB-containing devices).

► Nearly every person has been exposed to PCBs. The chemicals are found throughout the environment. Therefore, you are likely to have some amount of PCBs in your body, as would someone who does not live where contamination has been found in sediments and the soil. MDCH has been tracking people who were exposed to *polybrominated* biphenyls (PBBs) back in the '70s. We have tested thousands of samples throughout the state for both PBBs and PCBs. The testing results have shown that 10 parts per billion (ppb) PCBs in serum are common. The median (middle) value of PCBs in persons eating Great Lakes fish is about 50 ppb, though the value can range from 0 to 400 ppb.

The easiest way for PCBs to enter your body is by eating them, but, in some cases, you can also breathe their vapors or come into direct contact with them. As mentioned in the previous question's response, MDCH does not expect there to be significant, if any, amounts of PCBs in the air in the Ten Mile Drain area. Your skin is an effective barrier against most chemicals. If your hands are soiled with PCB-containing dirt, MDCH does not expect much, if any, absorption through the skin. Additionally, you would probably wash your hands after getting them dirty, which would remove the soil and the PCBs.

PCBs are stored in the body fat and can be detected in serum, blood plasma, and breast milk. Laboratory personnel should correct serum or plasma PCB concentrations for lipid (fat) content. Your doctor may not have experience with PCBs and may refer you to a professional with the Association of Occupational and Environmental Clinicians ([www.aoec.org](http://www.aoec.org)). The doctors in this organization have experience with patients have been exposed to chemicals at their job or elsewhere.

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If you have additional health questions, please contact:

- Christina Bush, MDCH Toxicologist, 1-800-648-6942 or [bushcr@michigan.gov](mailto:bushcr@michigan.gov)
- the Macomb County Health Department, 586-469-5235