

Ministry of the Environment,  
Conservation and Parks

# Surface Water Results 282 and 285 Ontario Street – Ministry Response and Next Steps

City Council  
City of St. Catharines  
June 28, 2021

# Purpose

- To provide the City of St. Catharines with an overview of the ministry's role and next steps to address elevated PCB concentrations discharging to the storm sewer from the former General Motors (GM) property.

# Surface Water Monitoring Survey

Sampling Events	Parameters Tested
February 13, 2020 – snow melt September 23, 2020 – dry event October 20, 2020 – rain event November 23, 2020 – rain event December 1, 2020 – rain event December 9, 2020 – dry event	General chemistry Metals Volatile Organic Compounds Acid base neutrals (semi-volatiles) Polycyclic aromatic hydrocarbons (PAH) Polychlorinated biphenyls (PCB)

## Survey Outcomes:

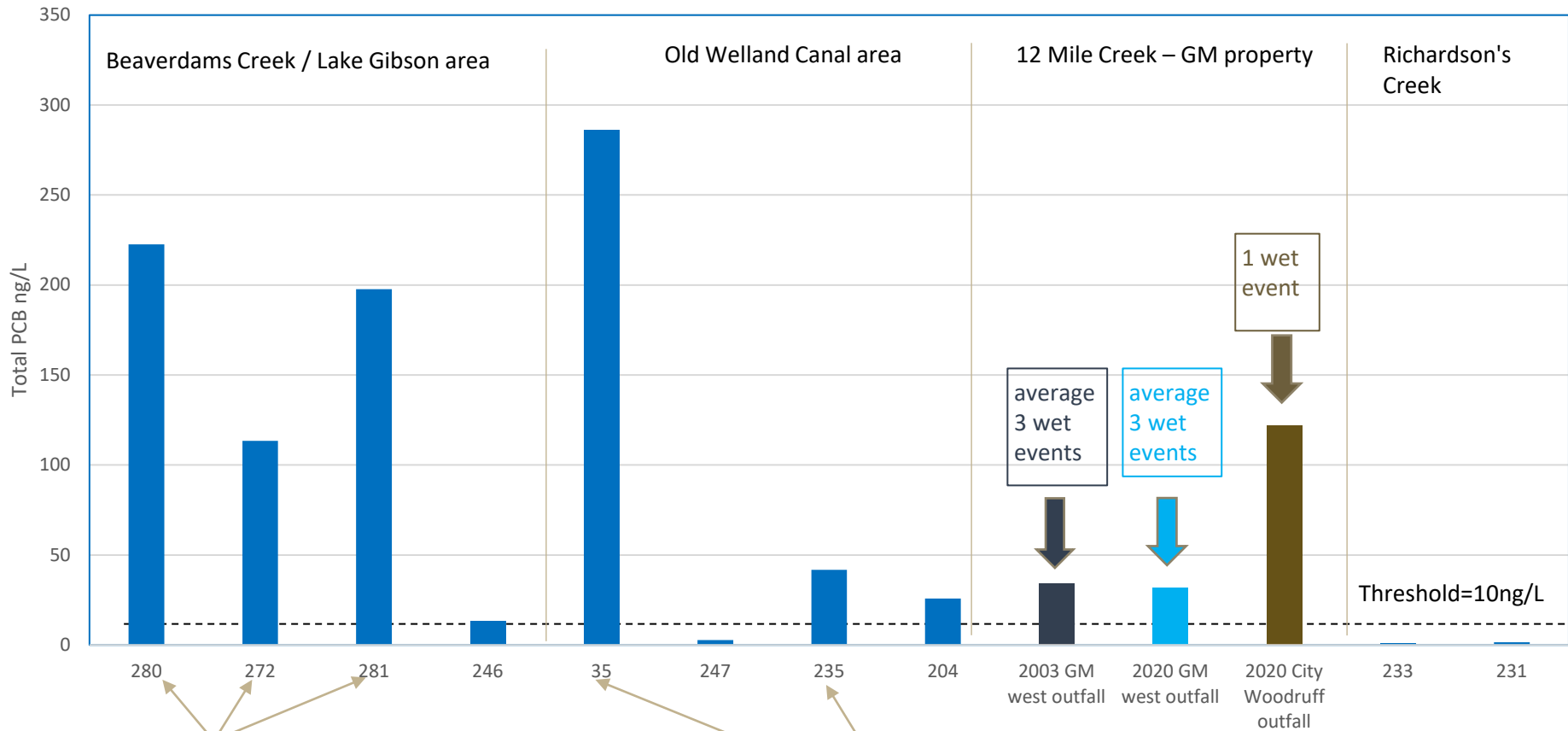
- No measurable impacts to Twelve Mile Creek water quality.
- A point source of PCBs was traced back to the property's east oil-grit separator.
- Remaining survey results are not cause for action based on applicable benchmarks:
  - Provincial Water Quality Objectives (PWQO)
  - Canadian Water Quality Guidelines (CWQG)
  - Government of Canada 1993 Priority Substance List Assessment Report
  - Typical urban stormwater and dry weather water quality
  - Twelve Mile Creek Trackdown monitoring data

# Surface Water Monitoring Locations – Nov 23 and Dec 9, 2020



Sample Location	Location Description
<b>GM Manhole STE-53 (GM east discharge)</b>	Former GM storm sewer manhole associated with the East Tilt Plate Separator that drains to the City storm sewer on Thomas Street.
<b>City Manhole Woodruff</b>	Municipal storm sewer manhole in creek valley near Woodruff Avenue that collects upstream City stormwater including Lowell Avenue.
<b>TMC Upstream E</b>	Twelve Mile Creek approximately 20 m upstream of the outfall from the City Manhole Woodruff.
<b>TMC Downstream E</b>	Twelve Mile Creek approximately 40 m downstream of the outfall from the City Manhole Woodruff.

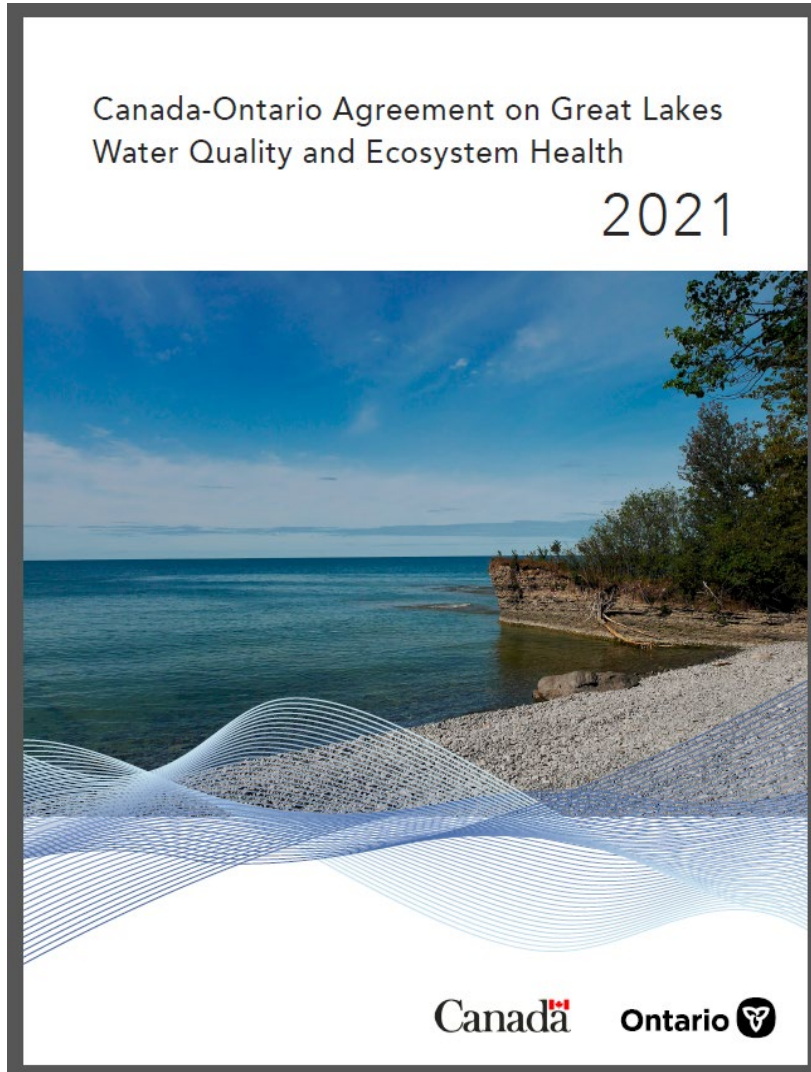
# MECP PCB Sampling in Twelve Mile Creek Watershed – 2003 and 2020



Three phases of PCB remediation were completed for Beaverdams Creek in 2008, 2010 and 2013.

Remedial work is ongoing for Clifford Creek and Carter Creek locations.

# Canada-Ontario Agreement



- The Canada-Ontario Agreement on the Great Lakes sets out a series of provincial priorities, including the continued reduction or elimination of the release of harmful pollutants, including PCBs to the Great Lakes basin.
- Consistent with the principles of the agreement, the ministry is committed to ensuring that the property owner takes action to stop elevated levels of PCBs from the former GM property from entering Twelve Mile Creek and Lake Ontario.

# Ministry Abatement Role & Process

## 1. Assess the need for interim measures:

- a) Potential for exposure and risk to public health.
- b) Measures to reduce exposure.
- c) Monitoring.

## 2. Ensure property owner retains a qualified consultant to prepare a workplan to identify and stop the source of PCBs to the storm sewer.

- a) Require and review progress reports.
- b) Determine appropriate compliance tools.
- c) Assess effectiveness.

# 1 a) Potential for Residential Exposure



Nearby residences are not impacted by PCBs in storm sewer.

- The groundwater flow is towards Twelve Mile Creek, away from residences.
- Surface water is collected on-site and flows through oil-grit separators (OGS).
  - West OGS directly discharges to the creek.
  - East OGS discharges to municipal sewer

0.3 0 0.13 0.3 Kilometers

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This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. This map is not to be used for navigation.





# 1a) Risk to Public Health

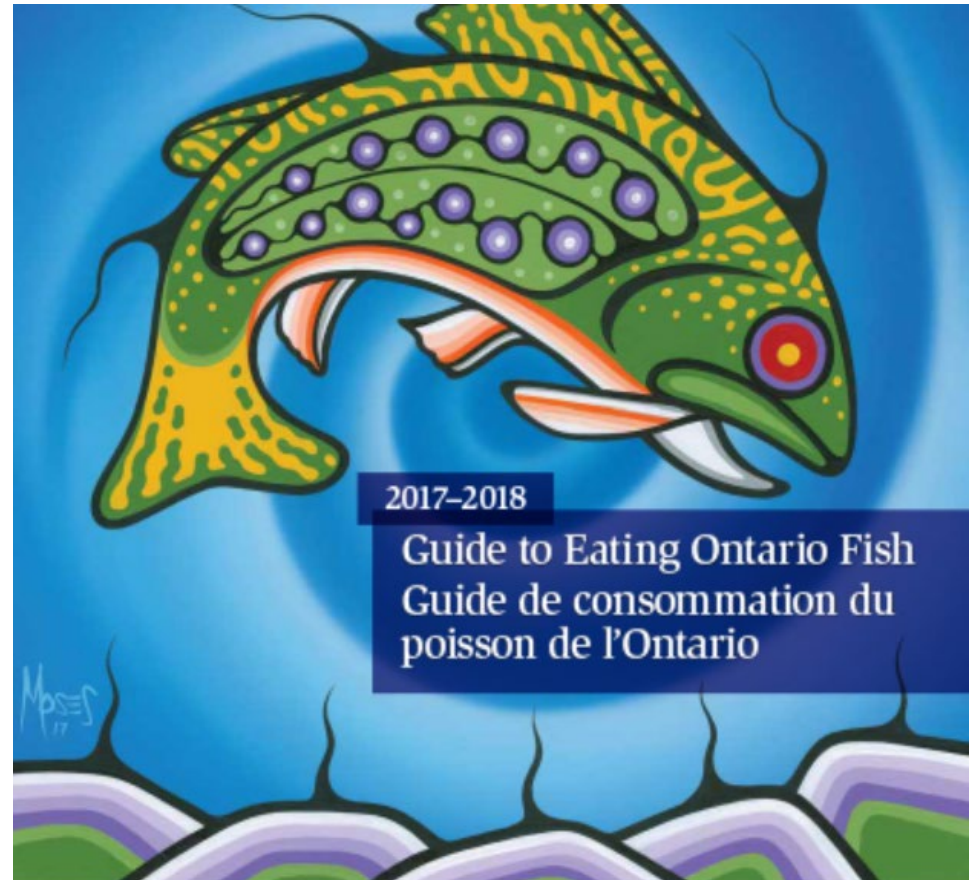
**Public Health was consulted on the water survey addendum results and have confirmed that their original comments have not changed:**

- Public Health has not detected any unusual health outcomes in the vicinity of the GM plant.
- Based on all the thorough sampling and analysis conducted by MECP, the water in the vicinity of the GM Plant appears to be better in terms of harmful contaminants than is typically seen in urban areas.
- Based on this evidence, Public Health believes there is no increased risk of adverse health to persons living in the vicinity of the former GM plant.
- Public Health is also supportive of the mitigation measures recommended by the ministry (i.e., updating on-site oil grit separators) to further protect local residents from environmental contaminants.

## 1b) Minimizing Exposure to PCBs

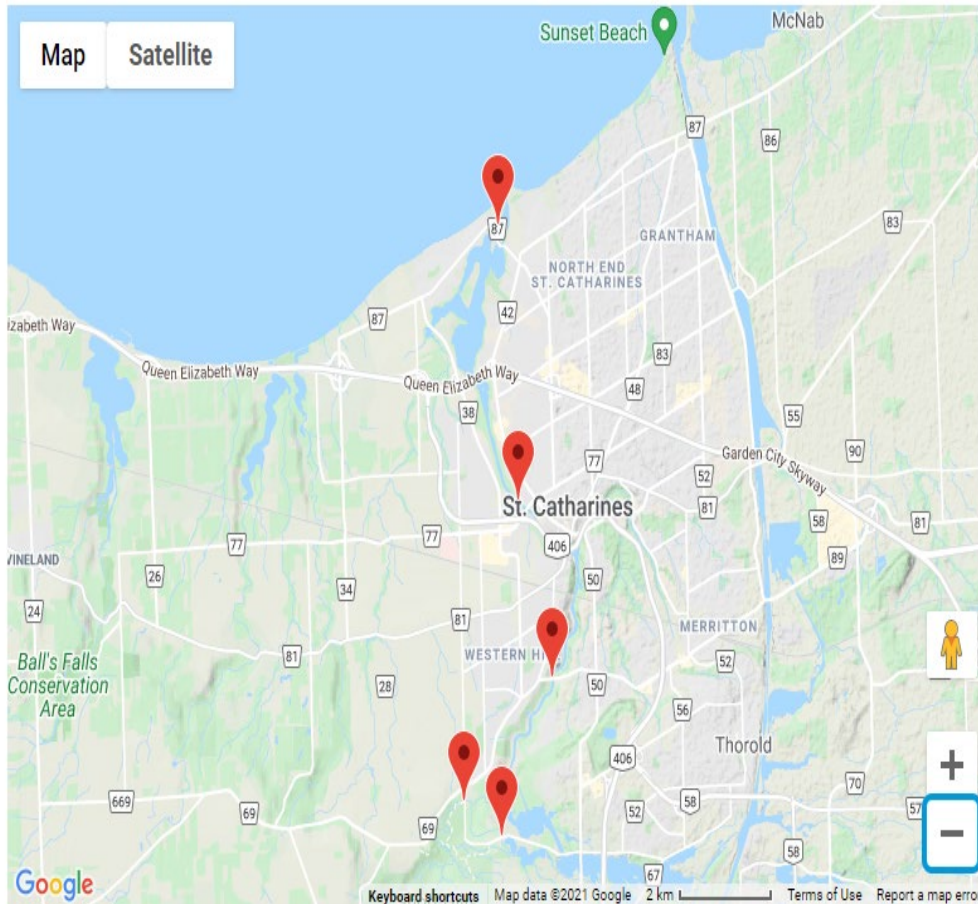
- The ministry's Guide to Eating Ontario Fish provides consumption advice based on guidelines provided by Health Canada to minimize exposure to PCBs in Twelve Mile Creek (Martindale Pond) and over 2400 other fishing locations in the province.

<https://www.ontario.ca/environment-and-energy/eating-ontario-fish>



[ontario.ca/fishguide](https://www.ontario.ca/fishguide) • [ontario.ca/guidepoisson](https://www.ontario.ca/guidepoisson)

# 1c) Provincial Water Quality Monitoring Network



Latitude:43.12264, Longitude:-79.14961 (UTM Zone:17, Easting:650523, Northing:4776095)

- The Provincial (Stream) Water Quality Monitoring Network (PWQMN) measures water quality in rivers and streams across Ontario for a number of parameters.
- Lakeport PWQMN station is located in Martindale Pond and has been sampled for PCBs from 1993 until 2012.
- 170 samples in this time period were non-detect, so PCBs analysis was discontinued in 2013.
- In 2020 the NPCA resumed sampling for PCBs at the Lakeport and Wellandvale Stations at the City of St. Catharines' request. All samples to date have been non-detect.
- The ministry has committed to completing four sample events from the Lakeport station over the next year using a lower detection limit.

\*Note that the Decew Water Treatment plant raw water is drawn from the Welland Canal (not Lake Gibson) and is tested extensively by the Regional Municipality of Niagara.

## 2a) Workplan and Progress Reports

- The ministry has received a workplan and has requested additional details from the property owner. The workplan belongs to the property owner and the ministry does not have the owner's consent to release it.
- The ministry recognizes that there is significant public interest in the environmental conditions at this site and commits to provide updates to City staff specific to stopping the discharge of PCBs to the City's municipal storm sewer.
- Ask that there be understanding of the ministry's legal obligation to maintain confidentiality:

*Environmental Protection Act states,*

*“ 168 (1) Except as to information in respect of the deposit, addition, emission or discharge of a contaminant into the natural environment, every provincial officer shall preserve secrecy in respect of all matters that come to his or her knowledge in the course of any survey, examination, test or inquiry under this Act or the regulations and shall not communicate any such matters to any person except,*

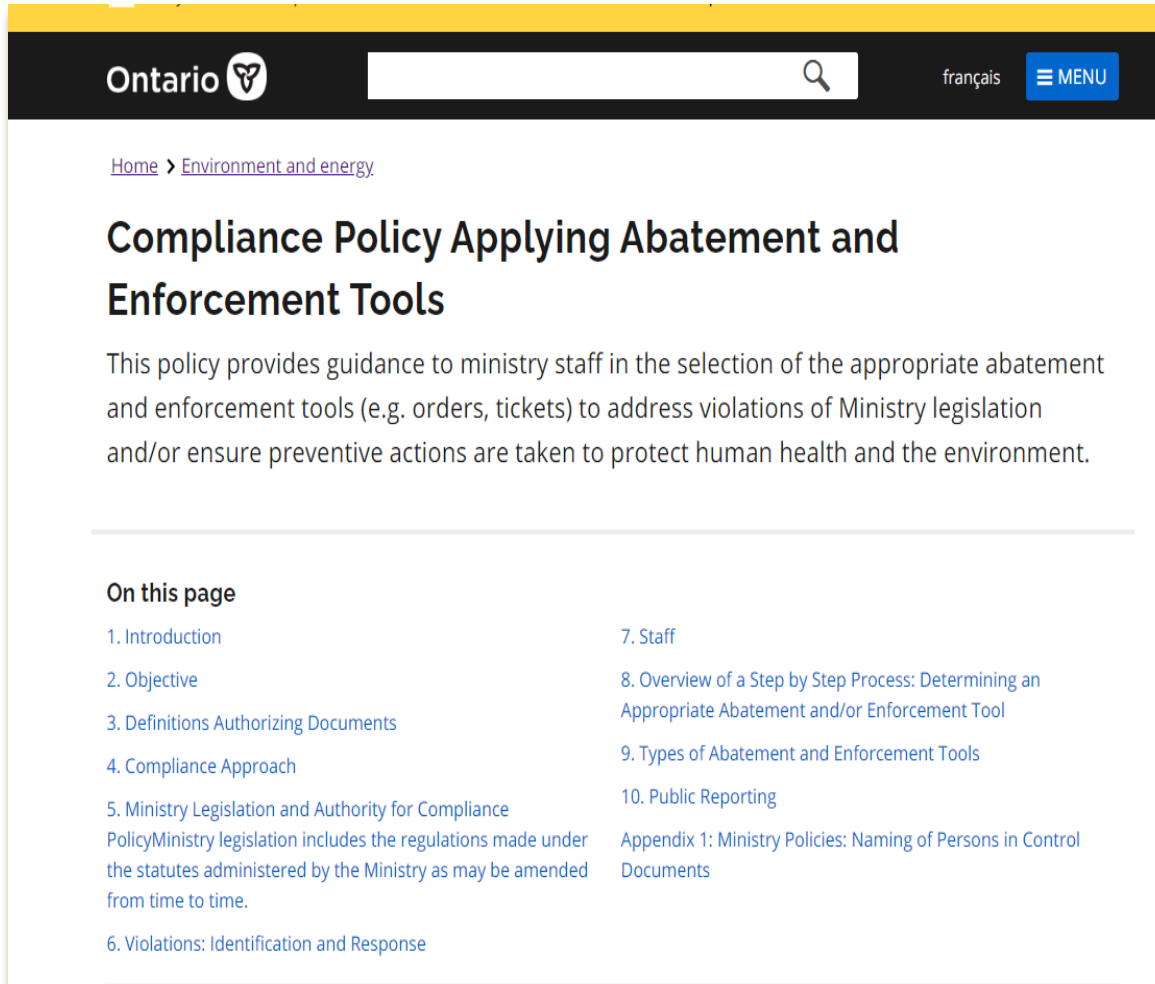
*(a) as may be required in connection with the administration of this Act and the regulations or any proceeding under this Act or the regulations;*

*(a.1) as authorized under the Regulatory Modernization Act, 2007;*

*(b) to the provincial officer's counsel; or*

*(c)<sup>2</sup>with the consent of the person to whom the information relates. ”*

## 2b) Determine Appropriate Compliance Tools



The screenshot shows the Ontario government website. The header includes the Ontario logo, a search bar, the word 'français', and a 'MENU' button. The breadcrumb trail is 'Home > Environment and energy'. The main heading is 'Compliance Policy Applying Abatement and Enforcement Tools'. Below the heading is a paragraph: 'This policy provides guidance to ministry staff in the selection of the appropriate abatement and enforcement tools (e.g. orders, tickets) to address violations of Ministry legislation and/or ensure preventive actions are taken to protect human health and the environment.' A section titled 'On this page' contains a list of 10 numbered links: 1. Introduction, 2. Objective, 3. Definitions Authorizing Documents, 4. Compliance Approach, 5. Ministry Legislation and Authority for Compliance Policy (with a sub-paragraph: 'Ministry legislation includes the regulations made under the statutes administered by the Ministry as may be amended from time to time.'), 6. Violations: Identification and Response, 7. Staff, 8. Overview of a Step by Step Process: Determining an Appropriate Abatement and/or Enforcement Tool, 9. Types of Abatement and Enforcement Tools, 10. Public Reporting, and Appendix 1: Ministry Policies: Naming of Persons in Control Documents.

- The company is voluntarily developing a plan to identify and stop the source of PCBs on the property.
- The timeline will depend upon the results achieved during the source identification activities and complexity of work to stop the source.
- The ministry follows our Compliance Policy to determine appropriate compliance action and will consider mandatory tools if the company fails to cooperate.

## 2c) Assessing Effectiveness

- The ministry will be completing an updated survey of water, sediment and biota in Twelve Mile Creek following the completion of all the PCB remediation projects.
- The results will be compared to original track down monitoring to assess the cumulative improvement as a result of the remedial activities.



# Questions?