



CITY OF
Thunder Bay
Superior by Nature

**Transportation & Works (CTB)
&
EcoSuperior**

GLBTS Workshop

May 18, 2005

Agenda

1. PPCP – History and Current Status
2. Pollution Prevention and Resource Management Programs
3. Success Stories
 - PCB,s
 - Mercury
4. Q & A

PPCP

**Pollution Prevention
&
Control Plan**

PPCP Overview

- ✓ to determine the extent of contamination of the watercourses passing through the City and Lake Superior due to direct municipal discharges
- ✓ to recommend ways to reduce this pollution
- ✓ to provide a detailed plan to reduce the risk of basement flooding due to the surcharging of the Sanitary Sewer System

PPCP Overview

Conclusions:

✓ Short Term Plan

- Over 5 to 10 years and provides a foundation for the Long Term Pollution Prevention and Control Plan measures

✓ Long Term Plan

- Planning horizon of 20 to 25 years

PPCP Overview

Short Term PPCP Key Elements:

- ✓ Collection System Management
- ✓ Combined Sewer Overflow (CSO) Controls
- ✓ Measures to reduce basement flooding
- ✓ Stormwater management
- ✓ **Pollution prevention**
- ✓ Enhanced sewage treatment at the Atlantic Avenue Water Pollution Control Plant

PPCP Overview

Long Term PPCP Key Elements:

- ✓ Collection system management
- ✓ Basement flooding
- ✓ Catchbasin Cross Connections

PPCP Overview

AND THAT Operating Budget expansions be considered, commencing in the year 2000, for increased cleaning of catchbasins, for C.C.T.V. inspections based on a ten (10) year cycle, and for flow monitoring;

AND THAT policy statements should be included in the proposed revisions to the City's Official Plan to limit new development in the area contributing to the McVicar Creek trunk sanitary sewer to the extent it will not cause problems in this trunk;

PPCP Overview

AND THAT future development and re-development in the City be planned in ways that mitigate negative impacts on the aquatic environment and do not increase the risk of basement flooding, to the greatest extent practical, based on sound engineering and biological principles;

AND THAT the City's By-law prohibiting connection of roof water downspouts to the sanitary sewer system be more stringently enforced;

PPCP Overview

AND THAT the Long Term projects identified by the Pollution Prevention and Control Plan be considered for implementation over the next ten (10) to twenty-five (25) years depending on the extent of new development in the northwestern part of the City;

AND THAT City Administration work collaboratively with local organizations to inform the public of ways in which they can assist the City to reduce pollution of the aquatic environment.

PPCP Status

- ✓ All PPCP components underway
- ✓ Received \$25 Million grant from CSIF for current projects
- ✓ Done in absence of Regulations
- ✓ Should allow for the de-listing of the Thunder Bay Harbor AOC

PPCP Status

What do we pay (Residential)

- Typical bill based on 20 cubic meters of water per month
 - \$21.00 water
 - \$13.00 sewage
 - \$34.00 Total

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Other Pollution Prevention & Resource Management Programs

Sewer Use Control Program

- ✓ Focus is to abate problem at source
- ✓ Best Management Practice (BMP's)
- ✓ Standby staff to respond to a spill
- ✓ Surcharge Agreements
- ✓ By-laws (enforceable)

Other Pollution Prevention & Resource Management Programs

PCB Removal Program

- ✓ Street Smart
- ✓ Lighting
- ✓ Capacitors

Other Pollution Prevention & Resource Management Programs

Mercury Diversion - EcoSuperior

- ✓ Button Battery Collection
- ✓ Mercury Vapour Lights (2000)
- ✓ Fluorescent Tubes (2000)
- ✓ Switches
- ✓ Mercury Thermometer Reduction (2001)

Other Pollution Prevention & Resource Management Programs

Energy Management Programs

- ✓ Roof/HVAC/Envelope
- ✓ Lighting
- ✓ Design
- ✓ Motor Replacements
- ✓ Water Conservation
- ✓ Watt a Bright Idea
- ✓ ESP Program/Next Generation

Other Pollution Prevention & Resource Management Programs

Water Conservation - EcoSuperior

- ✓ Water Audits
- ✓ Water Conservation Education Program
- ✓ Delivered to Grade 5 Students
- ✓ Focus is How to Conserve Water
- ✓ Downspout Disconnection Program
- ✓ Rain Barrels
- ✓ Toilet/Shower Head/Faucet Replacements

Other Pollution Prevention & Resource Management Programs

Recycling/Diversion Programs

- ✓ Depots (x3)
- ✓ Curbside Collection Program
- ✓ Home Composting
- ✓ White Goods Laydown Area
- ✓ Leaf & Yard Waste
- ✓ Put Jack in the Box
- ✓ Household Hazardous Waste Depot
- ✓ Merc Divert
- ✓ Bag Limits
- ✓ Waste Reduction Week

Other Pollution Prevention & Resource Management Programs

Partnerships

- ✓ Bowater mill waste program - waste material is diverted to the landfill site and reused, I.e. day cover (partnership)
- ✓ Provincial Papers - Landfill site capping program (partnership)
- ✓ Eco Superior - involved in all projects with City

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Success Stories

PCB's

PCB Removal Program Goal

- ✓ To identify and remove all PCB's under the control of the CTB;
- ✓ To ensure that all PCB's were disposed of in an environmentally friendly manner;

PCB Removal Program

WHY?

- ✓ On the primary list of the 12 banned bio-accumulative toxic substances;
- ✓ Known to administration that PCB's were in the workplace;
- ✓ CTB commitment to strive for excellence as an environmental steward.
- ✓ Consistent with the Lake to Lake concept (Environment Division)

PCB Removal Program HOW?

- ✓ Develop an inventory of all PCB's in the control of the CTB (locations)
- ✓ Determine the amount and volume of PCB's (liquid and equipment)
- ✓ Apply for the C of A for the handling and storage of PCB's
- ✓ Construct storage site

PCB Removal Program HOW?

- ✓ Develop programs for phase out
- ✓ Develop budgets for each program
- ✓ Created modified work programs
- ✓ Request budget approval
(City Council)
- ✓ Contract for transport and disposal services

PCB Removal Program

What programs?

Four main programs:

1. All street lighting - Street Smart
2. Lighting – interior and exterior lighting
3. Capacitors/Transformers – Water and Sewage Treatment Plants, Arenas
4. Main electrical transformers (removal/oil refinement)

PCB Removal Program

How much removed?

PCB Material	NO of Drums	Weight (Kg)
Lighting Ballasts	34	11,479
Capacitors	35	10,189
Power Factor Capacitors	4	697
PCB oil	5	1856
Perchloroethylene solvent	3	983
Solid cleaning debris	3	264
Total	84	25,486

PCB Removal Program Costs?

1. Street lighting - (???? Grants)
2. Lighting – interior and exterior lighting
\$200,000
3. Capacitors/Transformers – Water and Sewage
Treatment Plants, Arenas - **\$250,000**
4. Main electrical transformers (removal/oil
refinement) - **\$150,000**
5. Transport and Destruction - **\$125,000**
6. Storage Facility - **\$100,000**
7. PCB site inspections and MOE Reporting -
\$4,000/yr over 8 years

PCB Removal Program

Why successful?

- ✓ Commitment from City Council
- ✓ Supported by Administration
- ✓ Utilized modified work programs
- ✓ Achievements were recognized by agencies
- ✓ Goals were achieved

PCB Removal Program Status

- ✓ Complete
- ✓ Contingency Plan in Place
- ✓ C of A for storage site maintained



Success Stories

Mercury

Over to Jim



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Questions & Discussion

Other Pollution Prevention & Resource Management Programs

Current Planning

- ✓ Pay as you throw
- ✓ CEAP – Earthwise
- ✓ Greening the fleet
- ✓ Procurement of green energy
- ✓ Bio-gas Co-gen at Landfill and WPCP locations
- ✓ Anti idling policy
- ✓ Complete storm sewer separation
- ✓ Special Waste Depot (Eco center)
- ✓ Refine e-waste collection
- ✓ Hydro/Industrial water project