

# **CITY OF TORONTO SEWER USE BY-LAW AND ITS P2 REQUIREMENTS**



**Presentation to:**

**Great Lakes Regional Pollution  
Prevention Roundtable Summer  
Conference**

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# PRESENTATION OUTLINE

- **Background on the new Sewer Use By-law**
- **Council Approval Process**
- **Highlights of New Sewer Use By-law**
- **P2 requirements**
- **Update on P2 implementation**

# BY-LAW OBJECTIVES

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- ⌘ **to regulate the quality of storm and sanitary discharges into City's storm & sanitary sewers**
  - ⌘ **to continuously improve biosolids quality**



# WHY A REGULATORY SEWER USE BY-LAW IS NEEDED




- ⌘ **Environmental protection and long term health of receiving waters**
- ⌘ **Maintain the treatability of sewage at treatment plants**



# WHY A REGULATORY SEWER USE BY-LAW IS NEEDED

- 
- ⌘ **Maximize the opportunities for bio-solids reuse**
  - ⌘ **Sewer use equity**

# **BACKGROUND TO THE CITY'S NEW SEWER USE BY-LAW**

- 
- ⌘ By-laws harmonization due to six former cities and a Metro level of government amalgamated into one new city, January 1, 1998**

# AMALGAMATION OF SIX MUNICIPALITIES INTO NEW CITY OF TORONTO

## CITY OF TORONTO ONTARIO, CANADA



Location - North Shore Lake Ontario  
5th Largest City in North America  
2.4 Million People






# BACKGROUND TO NEW SEWER USE BY-LAW

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- ⌘ **Research studies have identified health and environmental risks due to toxic organics and metals**
  - ⌘ **Trend toward lower limits, particularly in Europe**



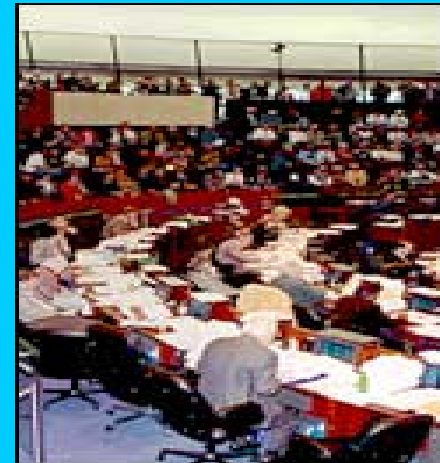


# **BACKGROUND TO THE NEW SEWER USE BY-LAW**

- 
- ⌘ **U.S. successes in using Pollution Prevention Planning for industrial discharges**
  - ⌘ **City Council's decision to stop incineration and implement 100 % beneficial reuse of biosolids**

# PROCESS FOR COUNCIL APPROVAL OF NEW SEWER USE BY-LAW

- ⌘ **Staff prepared draft By-law in consultation with Federal, Provincial agencies, special interest group (World Wildlife Fund) and relevant research reports**
- ⌘ **Council adopted draft by-law and approved a public consultation plan**




# PROCESS FOR COUNCIL APPROVAL OF NEW SEWER USE BY-LAW

- ⌘ **Draft By-law mailed to 6,000 stakeholders on May 12, 1999 and posted on Web site**
- ⌘ **6 months of public and industry sector meetings - started June 1999**



# PROCESS FOR COUNCIL APPROVAL OF NEW SEWER USE BY-LAW

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- ⌘ **9 industry/public meetings in June 1999**
  - ⌘ **20 presentations to neighbourhood liaison committees and business associations**
  - ⌘ **Draft By-law modified where appropriate**

# PROCESS FOR COUNCIL APPROVAL OF NEW SEWER USE BY-LAW


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- ② **Following two days of debate and deputations, on July 6, 2000, City Council adopted a new Sewer Use By-law with lower limits**



# HIGHLIGHTS OF NEW SEWER USE BY-LAW

- ⌘ **More stringent limits on chromium, copper, lead, mercury, nickel, selenium and zinc**
- ⌘ **27 new organic limits in sanitary and storm sections**
- ⌘ **11 heavy metals and 27 organics =  
Subject Pollutants**

# HIGHLIGHTS OF NEW SEWER USE BY-LAW

- 
- ⌘ **2-year phase-in period for the new limits**
  - ⌘ **P2 planning requirements for any industry discharging subject pollutants in any amount**
  - ⌘ **Submission of updated P2 plan summary every two years and updated P2 plan every 6 years**



# HIGHLIGHTS OF NEW SEWER USE BY-LAW

- **Subject sector industry**

- **Metal Finishers**
- **Industrial Launderers**
- **Gas Stations/Auto Repairs**
- **Photo Finishing/Printing**
- **Dentists/Medical Labs**
- **Textile**
- **Organic Chemical**
- **Soap & Detergents**
- **Rubber & Plastics**

**ANY AMOUNT**  
**of Subject Pollutant**

**Submit**  
**P2 Plan Summary**

**Every industry discharging**





# HIGHLIGHTS OF NEW SEWER USE BY-LAW

## **P2 Plan Summary due dates - phased-in sector by sector**

- **June 30, 2001**
  - **Metal Finishers**
- **December 31, 2001**
  - **Industrial Launderers**
  - **Gas Stations/Auto Repairs**
  - **Photo finishing/Printing**
  - **Dentists/Medical Labs**
  - **Textile**
- **June 30, 2002**
  - **Organic Chemical**
  - **Soaps & Detergents**
  - **Rubber & Plastics**



# HIGHLIGHTS OF NEW SEWER USE BY-LAW

- **>June 30, 2000 any new business in target sector or discharger of subject pollutant will have one year from date of commencement to initiate P2 process**
- **90 days extension to amend P2 plan summary if not approved**

# P2 PLAN and P2 PLAN SUMMARY FORMS

## P2 Forms Designated by Council

- ◆ **Generic P2 Plan and P2 Plan Summary forms for manufacturing industries**
- ◆ **Sector specific P2 forms for commercial/institutional sectors**
  - 📄 **Photo Finishing**
  - 📄 **Printing**
  - 📄 **Dental**



# P2 PLAN and P2 PLAN SUMMARY FORMS

## Other Sector-specific P2 forms



 **Health Care**

 **Textile**

 **Gas Bars, Car Washes, Service Bays**

 **Auto Body Repair**



# P2 Training

## **INDUSTRY SPECIFIC P2 TRAINING**

- 1 day or 1/2 day training sessions for each subject sector**
- Working with industry associations to coordinate training**
- Objective is for industry to understand P2 benefits, opportunities and avoid having to hire consultant**



# Communication to Industries

- **Direct contact**
- **Associations**
- **Workshops**
- **Information booths**



# P2 Submission Status

- **Metal Finishing Sector - 95 %**
- **Dental Clinics - 90%**
- **Auto Body - 40%**
- **Automotive Service - 65%**
- **Printing & Graphics - 50%**
- **Photofinishing - 80%**
- **Hospitals - 90%**
- **Industrial Laundries - 70%**



# **P2 OPTIONS SELECTED BY VARIOUS SECTORS**

## **Auto Body Refinishing**

- **use of low VOCs paints**
- **use of solvent recycler**
- **employee training**
- **product substitution - switch to water-based paints**





# **P2 OPTIONS SELECTED BY VARIOUS SECTORS**

## **Textile**

- **eliminate NPs and NPEs**
- **reduce subject pollutants through modification of in-house operating systems**

## **Printing**

- **using Clean Print Check Sheets**
- **eliminate subject pollutants through product substitution**
- **process and equipment modifications**



# **P2 OPTIONS SECLECTED BY VARIOUS SECTORS**

## **Metal Finishing**

- **waste segregation**
- **use lower concentration plating solutions**
- **filtration to reduce bath dumps**
- **minimize drag-outs**
- **counter current rinses**
- **spray and fog rinses**
- **capture drag-out before rinsing and recycle into the process**
- **use of flow restrictors in rinse water**



# **P2 OPTIONS SELECTED BY VARIOUS SECTORS**

## **Automotive Service Industries**

- **product substitution for nonylphenols and nonylphenol ethoxylates**
- **employee training**
- **spill prevention**
- **good housekeeping**

## **Dental Clinics**

- **installation of amalgam separator**
- **recycling of waste amalgam**
- **using alternatives**

# **SPECIAL REQUIREMENT FOR DENTISTS**

- **Every owner or operator of a premises from which dental waste amalgam may be discharged, which waste may directly or indirectly enter a sewer, shall install, operate and properly maintain dental waste amalgam separator(s) in any piping system at its premises that connects directly or indirectly to a sewer by no later than January 1, 2002**

# MERCURY IN BIOSOLIDS

Month	HCTP Raw Sludge Average Hg (mg/kg dry wt)	HTP Digested Sludge Average Hg (mg/kg dry wt)	ABTP Digested Sludge Avg Hg (mg/kg dry wt)	NTTP Digested Sludge Average Hg (mg/kg dry wt)
Jan. 2001	1.9	4.83	2.4	3.86
Feb. 2001	0.7	1.48	1.75	3.47
Mar. 2001	1.1	0.17	1.8	3.93
Apr. 2001	1.2	1.4	1.9	3.08
May-01	2.0	1.19	2.0	2.45
Jun. 2001	2.4	2.31	2.0	3.08
Jul-01	1.1	14.36	2.2	3.88
Aug. 2001	1.8	4.48	3.5	2.97
Sept. 2001	0.9	1.81	3.0	3.05
Oct. 2001	1.1	4.4	3.7	2.58
Nov. 2001	0.9	3.17	1.55	3.17
Dec. 2001	1.4	2.02	2.0	3.39
<b>Average</b>	<b>1.38</b>	<b>3.47</b>	<b>2.32</b>	<b>3.24</b>
Jan. 2002	0.75	1.15	0.75	1.68
Feb. 2002	1.1	1.0	1.55	1.30
Mar. 2002	0.56	1.18	1.45	2.32
Apr-02	0.50	0.50	0.80	2.70
May-02	0.30	0.70	1.15	1.31
Jun-02	0.4	2.0	1.5	2.3
<b>Average</b>	<b>0.61</b>	<b>1.09</b>	<b>1.2</b>	<b>1.94</b>

# **TORONTO BY-LAW WEB SITE**

**[www.city.toronto.on.ca/  
involved/wpc/nbylaw.htm](http://www.city.toronto.on.ca/involved/wpc/nbylaw.htm)**