WATERTECH 2009
POLLUTION PREVENTION THROUGH
SEWER USE BY-LAW

York Region
York Region - Pollution Prevention Through Sewer Use By-law

PRESENTATION OUTLINE

- BACKGROUND
- IMPLEMENTATION OF THE BY-LAW
- HIGHLIGHTS OF THE 2005 SEWER USE BY-LAW
- CHALLENGES DURING IMPLEMENTATION
- ACHIEVEMENTS
- MOVING FORWARD
York Region - Pollution Prevention Through Sewer Use By-law

OUTLINE

- Background
- Implementation
- Highlights
- Challenges
- Achievements
- Moving Forward

YORK REGION AND GTA

York Region and the GTA

CANADA

ONTARIO
### York Region - Pollution Prevention Through Sewer Use By-law

#### SEWER USE BY-LAW COMPARISON

<table>
<thead>
<tr>
<th>Parameters</th>
<th>1978</th>
<th>1992</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sanitary-Conventional</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Sanitary-Metals</td>
<td>19</td>
<td>25</td>
<td>17</td>
</tr>
<tr>
<td>Sanitary-Organic</td>
<td>0</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>Storm-Conventional</td>
<td>7</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Storm-Metals</td>
<td>17</td>
<td>27</td>
<td>17</td>
</tr>
<tr>
<td>Storm-Organic</td>
<td>0</td>
<td>0</td>
<td>16</td>
</tr>
</tbody>
</table>

#### OUTLINE
- Background
- Implementation
- Highlights
- Challenges
- Achievements
- Moving Forward
# York Region - Pollution Prevention Through Sewer Use By-law

## SEWER USE BY-LAW CHANGES

<table>
<thead>
<tr>
<th>Parameter</th>
<th>1978</th>
<th>1992</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional</td>
<td>10</td>
<td>BOD - 300 from 500</td>
<td>No change</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S.S. - 350 from 600</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>P - 10 from 100</td>
<td></td>
</tr>
<tr>
<td>Metals</td>
<td>19</td>
<td>Reduced Ni - 3 from 5</td>
<td>Reduced Cd - 0.7 from 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cd - 1 from 2</td>
<td>Cr - 2 from 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Deleted</td>
<td>Hg - 0.01 from 0.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ba</td>
<td>Ni - 2 from 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sb</td>
<td>Se - 1 from 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mn</td>
<td>Zn - 2 from 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mo</td>
<td>Cl</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Se</td>
<td>Fe</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ag</td>
<td>S</td>
</tr>
</tbody>
</table>

## Background

Implementation

Highlights

Challenges

Achievements

Moving Forward
REGULATORY DRIVERS

- Municipal Industrial Strategy for Abatement (MISA)
- Model Sewer Use By-Law
- The Canadian Council of Ministers of the Environment (CCME)
- IEMDMS
NEW SEWER-USE BYLAW

- Simplified, Easy to Understand
- Incorporation of ISO 14001 and Pollution Prevention
- Limits comparable to other GTA municipalities
- More stringent metal limits
York Region - Pollution Prevention Through Sewer Use By-law

IMPLEMENTATION FLOW CHART

- Consulted Toronto 2002
- Developed With Durham & Peel Regions 2002
- Consulted Industries Associations Local Municipalities Environmental Agencies
- Reviewed Comments 2004
- Finalized 2005
- ENACTED JAN 2005

OUTLINE
- Background
- Implementation
- Highlights
- Challenges
- Achievements
- Moving Forward
York Region - Pollution Prevention Through Sewer Use By-law

BY-LAW S64-2005-009

2005 HIGHLIGHTS

- Pollution Prevention
- Simplified Format
- Specific conditions for acceptance of Hauled sewage
- 20 New Organic Parameters

OUTLINE

Background
Implementation
Highlights
Challenges
Achievements
Moving Forward
CHALLENGES

- UPPER AND LOWER TIER SYSTEMS
- MULTIPLE WATERSHEDS
- VAST GEOGRAPHICAL AREA
York Region - Pollution Prevention Through Sewer Use By-law

OUTLINE
- Background
- Implementation
- Highlights
- Challenges
- Achievements
- Moving Forward

UPPER AND LOWER TIER SYSTEMS
York Region - Pollution Prevention Through Sewer Use By-law

OUTLINE

Background
Implementation
Highlights
Challenges
Achievements
Moving Forward

MULTIPLE WATERSHEDS

11/25
York Region - Pollution Prevention Through Sewer Use By-law

I & CI MONITORING LOCATIONS

SIMCOE

PEEL

TORONTO

DURHAM

Background
Implementation
Highlights
Challenges
Achievements
Moving Forward
WASTEWATER DISTRIBUTION

Sanitary Water Distribution to Wastewater Treatment Plants

- Durham Region
- Peel Region
- Kleinburg STP
- Mt.Albert STP
- Keswick STP
- Schomberg Lagoons
- Sutton STP
- Holland Landing Lagoons
Achievements

- MET STP Requirements
- Positive Feedback
- Reduction of Loading Parameters
York Region - Pollution Prevention Through Sewer Use By-law

ACHIEVEMENTS

MET STP REQUIREMENTS

- Assisted Duffin Creek WPCP to comply with new air emission limits
- Improved the quality of bio-solids
ACHIEVEMENTS

POSITIVE FEEDBACK

- Industries complied with the new limits
- Positive Feedback from Public Consultations
ACHIEVEMENTS

REDUCTION OF LOADING PARAMETERS

- Reduced Metal Loadings
- Industries complied with all 20 New Organic Parameters introduced in the new bylaw
CASE STUDIES

Mercury Levels 2004-2005

Date

20/25
CASE STUDIES

York Region - Pollution Prevention Through Sewer Use By-law

OUTLINE
Background
Implementation
Highlights
Challenges
Achievements
Moving Forward

CASE STUDIES

Zinc Level at Boundary Meter
Nickel Level at Boundary Meter
Selenium Level at Boundary Meter
Cadmium Level at Boundary Meter
Chromium Level at Boundary Meter
Mercury Level at Boundary Meter

York Region
York Region - Pollution Prevention Through Sewer Use By-law

MOVING FORWARD

- Lake Simcoe Phosphorous Removal
- Best Management Practices
- Pollution Prevention
Submitted a proposal to Environment Canada

Developing a corporate phosphorous management strategy for lake simcoe watershed

Committed to reduce phosphorous loading from region’s Water Pollution Control Plants
York Region - Pollution Prevention Through Sewer Use By-law

BEST MANAGEMENT PRACTICES

- Part of the Sewer Use By-law Enhancement Program
- Formulation of Best Practices by Research
- Continuous Reassessment as per Regional Mandates
York Region - Pollution Prevention Through Sewer Use By-law

- **Motto:** Protection of Environment, Staff and Infrastructure
- **Process changes, reuse and recycling**
- **Ontario Center for Environmental Technology Advancement (OCETA-TRSP) and Canadian Centre for Pollution Prevention (C2P2)**
- **Monitoring and Continuous Improvements using KPI**
York Region - Pollution Prevention Through Sewer Use By-law

- Enacted Sewer Use By-Law to reduce metal parameter loadings
- Given 2 years for Industries for to comply
- With our due diligence and the Industries co-operation, Metal Parameters were reduced
THANK YOU

Vetri Kasinathan, M.Sc.
Enforcement Officer
Environmental Promotion and Protection Branch
Environmental Services Department
(905)895-1200 Ext.5053
Vetri.kasinathan@york.ca