

Sewers By-law 2009 Compliance and Enforcement

Date:	February 11, 2010
To:	Public Works and Infrastructure Committee
From:	General Manager, Toronto Water
Wards:	All
Reference Number:	P:\2010\Cluster B\TW\pw10005

SUMMARY

This report provides a summary of the activities undertaken by Toronto Water in 2009 with respect to compliance and enforcement of the Municipal Code Chapter 681-Sewers (the “Sewers By-law”). This report also addresses the request made by the Public Works and Infrastructure Committee for a report on surveys of businesses using Best Management Practices.

Financial Impact

There are no financial implications to the City as a result of this report.

The Deputy City Manager and Chief Financial Officer has reviewed this report and agrees with the financial impact information.

DECISION HISTORY

At its meeting on December 11, 12 and 13, 2007, during consideration of report EX15.6 from the Executive Committee, City Council requested the General Manager, Toronto Water, to report annually to the Public Works and Infrastructure Committee on compliance and enforcement activities to support Municipal Code Chapter 681 – Sewers.

<http://www.toronto.ca/legdocs/mmis/2007/ex/decisions/2007-11-26-ex15-dd.pdf>

Toronto Water submitted its first Annual Sewers Report to the April 9, 2008 meeting of Public Works and Infrastructure Committee.

<http://www.toronto.ca/legdocs/mmis/2008/pw/bgrd/backgroundfile-10406.pdf>

Additionally, City Council at its December 1, 2 and 3, 2008 meeting requested the General Manager, Toronto Water, to report back to the Public Works and Infrastructure Committee on the recommendations concerning compliance plans, and the review of inspection and sampling targets made by the Auditor General in his November 4, 2008 report to the Audit Committee entitled: *“Protecting Water Quality and Preventing Pollution – Assessing the Effectiveness of the City’s Sewer Use Bylaw, Toronto Water”*.

http://www.toronto.ca/audit/reports2008_sub14.htm.

The link for the December 1-3, 2008 Council meeting can be found at:

<http://www.toronto.ca/legdocs/mmis/2008/cc/minutes/2008-12-01-cc27-mn.pdf>

Toronto Water submitted its second Annual Sewers Report to the June 3, 2009 meeting of Public Works and Infrastructure Committee. At this meeting the General Manager, Toronto Water was requested to include the results of a survey of businesses using Best Management Practices as part of the 2009 Sewers By-law Compliance and Enforcement report.

<http://www.toronto.ca/legdocs/mmis/2009/pw/decisions/2009-06-03-pw25-dd.htm>

ISSUE BACKGROUND

Each year Toronto Water inspects and samples industries in the City of Toronto with respect to the Sewers By-law. The term industry refers to establishments which undertake some form of industrial processing or manufacturing, along with commercial and institutional facilities, which generate wastewater. The term does not include warehouses or retail businesses.

Toronto Water uses an established sampling and inspection target for industries based on the risk potential to pollute. Staff categorize facilities into three categories: (a) High Potential (HP), (b) Medium Potential (MP) and, (c) Low Potential (LP) in order to allocate its resources efficiently to the greatest risk to the sewer system and waste water treatment plants.

Industries that discharge toxic organic or heavy metal contaminated effluents to the sewer system are generally classified as high potential. In 2009, staff classified 88 industries as HP. These industries are generally sampled monthly and inspected annually at a minimum.

An industry that discharges effluent with oil and grease or conventional treatable parameters is generally classified as MP. There are several hundred MP industries that are targeted to be inspected annually and sampled every two months. A typical example of a MP would be food processors.

Industries that have either low volume flows or a low impact to disrupt the sewer system or wastewater treatment plant are classified as LP. These industries are not visited as often as those of the higher risk categories. Further, industries without wet processing, liquid storage, outdoor storage, or industrial discharges to sanitary/storm sewers are not part of the Toronto Water inspection and sampling protocol. When staff identify these types of facilities, they are classified as Dry.

Toronto Water Provincial Offences Officers also allocate time to compliance of the Water Supply By-law by performing inspections and follow-up on the installation and maintenance of

Backflow Prevention devices. There are some limited overlaps of similar clients under the Water Supply By-law with the Sewers By-law.

The Provincial Offences Officers provide 24 hour response to spills and complaints 7 days a week. This is achieved by having a rotating schedule of Officers on-call every day and night.

Toronto Water also monitors storm and combined sewer outfall discharges to receiving waters during dry weather to find contaminated outfalls. This program is known as the Outfall Monitoring Program and samples are obtained from sewer outfalls and/or within the sewer system for analysis and compliance with the Sewers By-law. Investigation and identification of illegal discharges to the sewer system (including cross connections) is part of this program.

In the summer of 2009, the City of Toronto experienced a six week labour disruption which suspended Toronto Water's daily activities under the Sewers By-law. During this time, many industries were not inspected or sampled routinely. However, management staff provided 24 hour response to complaints and spills that were reported by the public. In addition, management staff ensured that a modified beach sampling program continued throughout the disruption period allowing mainland beach closure postings to be available for the citizens of Toronto.

COMMENTS

This is the third annual report on Sewers By-law compliance by Toronto Water. The Division's Environmental Monitoring and Protection Unit is charged with overseeing this By-law and has two primary responsibilities: (i) monitoring and control of industrial waste discharges into the sewer system and monitoring discharges from sewer outlets into receiving waters; and (ii) by-law enforcement.

Toronto Water ensures that contaminants that may be harmful to the sewer system, such as heavy metals, solvents, etc. are restricted to the permissible levels noted within the Sewers By-law and identifies illegal cross connections to the storm sewer system. In 2009, staff conducted 4,235 inspections and performed 4,839 sampling events that resulted in 27,732 laboratory analyses. Staff also respond to environmental sewer complaints and spills. In 2009, Toronto Water received 232 complaints related to industrial waste and residential discharges and storm sewer issues.

If a violation of one or more Sewers By-law provisions is identified, Toronto Water staff will contact the facility to advise of the non-compliance and issue a Notice of Violation (NOV) letter. Toronto Water issued a total of 718 NOV letters in 2009. In the event that multiple violations are identified, stricter enforcement action may be undertaken. It should be noted that a single violation of sufficient severity can result in Provincial Offences Officers collecting evidence and proceeding with formal charges under the By-law. Table 1 lists a summary of violation categories that resulted in the issuance of NOVs in 2009.

Table 1: 2009 Notice of Violations under the Sewers By-law

Violations	Number
Sanitary & Combined Sewer Requirements ¹	452
Storm Sewer Requirements ²	21
Lack of grease interceptor ³	236
Maintenance Access Hole Requirement	8
Septic Waste Haulers for exceeding metal limit	1
Total	718

Note: 1) Includes violation notices sent for P2 plans and summaries not submitted; 2) Violations for Storm Sewer Requirements include violations found during routine industrial inspections and also outfall monitoring. 3) NOV's sent for grease interceptor violations are based on Toronto Public Health (TPH) referrals with staff inspections or strictly staff self initiated inspections. TPH referrals do not necessarily result in NOV issuance.

During 2009, Toronto Water investigated 21 industries for potential prosecution. Fourteen (14) of the 21 investigations resulted in industry being charged with offences under the Sewers By-law and these prosecution cases are presently before the courts. There were also four convictions from previous years' charges resulting in \$36,500 in fines, excluding victim surcharge fine (VSF). Additionally, some previous prosecutions continue to remain before the courts.

Appendix A provides details of the 4 convictions in 2009. Notably, a company was charged with failing to submit a Pollution Prevention (P2) Plan and also charged with excessive zinc levels, above the sanitary discharge By-law limit. A trial was held and it resulted in the first Pollution Prevention conviction for the City, carrying a fine of \$2,500. In addition, a Prohibition Order against the company was imposed for any sanitary discharges exceeding the zinc Sewers By-law limit. This means that should the company be found to exceed the zinc sanitary discharge limit, it will be in contempt of court and the owner of the company could face a possible jail sentence.

Table 2 below provides a comparison of Sewers By-law compliance and enforcement activities undertaken by Toronto Water during the past three years.

Table 2: Comparison Sewers By-law Compliance and Enforcement Activities

Activity	2009¹	2008	2007
Inspections	4,235	4,245	4,418
Sampling Events	4,839	4,884	4,539
Lab Tests Requested	27,732	27,258	14,682
Notice of Violations Issued	718	2,805	418
Complaints	232	297	205
Investigations	21	10	24
Prosecutions ²	14	4	26
Convictions ³	4	6	9

Unsuccessful Prosecutions	0	0	0
Withdrawn Prosecutions where charges laid	0	2	2
Fines (excluding 25% victim surcharge fee)	\$36,500	\$37,000	\$49,000

Note: 1) Six week Labour disruption; 2) Prosecution refers to the number of cases where charges laid in that year and may still be before the courts for either Sewers By-law or Water Supply By-law as Toronto Water Provincial Offences Officers are responsible for both By-Laws. The number reported includes 4 Water Supply By-law charges; 3) Convictions may include multiply prosecutions for a company with higher fines.

There were 130 facilities with active Industrial Waste Surcharge Agreements (IWSA) that were monitored in 2009. These agreements generated approximately \$6.7 million in revenue for Toronto Water.

Toronto Water also oversees the Pollution Prevention (P2) Program which requires Industrial, Commercial and Institutional (ICI) facilities to prepare and submit mandatory P2 plans or follow Best Management Practices (BMP). The P2 Program requires industry to review processes and identify and reduce any of the 38 subject pollutants listed in the Sewers By-law. Industrial sectors such as automotive repair, photofinishing and car washes follow BMP's to minimize contaminant releases to the sewer system. In 2009, there were 1,023 P2 plans submitted to Toronto Water with 36 of them being rejected.

During 2009, under the Outfall Monitoring Program, staff found 315 cross connections of which, 312 were corrected. Since 2005, the Outfall Monitoring Program has found 484 cross connections, corrected 470 of these and de-listed 30 priority outfalls.

(1) Routine Industrial Inspection and Sampling Program

Toronto Water Provincial Offences Officers inspect industries to determine whether there are any concerns about a facility's discharge to the sewer system. These inspections typically include evaluation of works performed; chemicals and products used or stored, and waste streams that are produced on-site. During an inspection, the Officers make notes, take pictures, interview staff, obtain copies of documents and/or process inventory logs, and can collect samples. During routine inspections, the Officers may make observations or issue directives to rectify issues that were identified. The Officers also collect samples from the various facilities that discharge to the sewer system. These samples are analyzed by the Toronto Water laboratory and the results are assessed for compliance with the Sewers By-law parameter limits.

When time permits, Officers conduct street-by-street searches for new/unknown or unlisted industries to increase the industry database listing. Gap analyses are also performed with any sector industry listings that are obtained from other Divisions or regulatory agencies. Inspections are conducted using a new streamlined annual inspection form that was established in 2009 to allow for efficient and standardized work.

In 2009, under industrial waste control, there were 2,039 industry inspections conducted and 3,565 industrial sampling events performed.

(2) Industrial Waste Surcharge and Sanitary Discharge Agreements

Industries that exceed the effluent concentration limits for four specific and treatable parameters have the option of entering into an Industrial Waste Surcharge Agreement (IWSA) with Toronto Water or installing on-site treatment to comply with the By-law. Most tend to enter into an IWSA as it is generally more cost effective than installing a separate wastewater treatment system on-site.

The four parameters permissible under an IWSA include: Biological Oxygen Demand (BOD), Total Suspended Solids (TSS), Phosphorous, and Phenols; all of which are treatable at the wastewater treatment plant. Under an IWSA, sample data are used to evaluate the quality of effluent generated by companies for the purpose of recovering the costs of providing treatment for the excess amount over the By-law limit.

In 2009, at peak levels, there were 135 companies under an IWSA. Fourteen (14) companies were newly added to the IWSA program and five companies closed operations at some point during 2009. Additionally, through the work of the Provincial Offences Officers, 17 more companies were identified as possible surcharge industries following initial grab sampling. These companies are now being evaluated for an IWSA following the company's commitment to enter into an IWSA. This is expected to raise the number of companies on an IWSA to 146 in 2010. It should be noted that the IWSA program generated over \$6.7 million in revenue in 2009. The City collected \$7.1 million in revenue in 2007 and \$6.4 million in 2008.

Industries that have entered into an Industrial Waste Surcharge Agreement are sampled up to twenty four (24) times per year. A rolling average determines the industry's discharge concentration. The concentration combined with volume of water used by the company and the set fee (under Municipal Code Chapter 441 - Fees and Charges) of 57 cents per kilogram, determines the quarterly bill issued to companies. The IWSA defines maximum concentration limits. If these limits are exceeded, then Sewers By-law enforcement action of issuing a NOV occurs. As a result of an amendment to City of Toronto Municipal Code Chapter 441 - Fees and Charges, a change was made to the Industrial Waste Surcharge and Sanitary Discharge Agreements or Permits to reflect that a fee of \$500 be applied to industry per billing quarter to offset the City's time and analysis for those companies where minimum charges would result. Appendix B lists the industries in the IWSA program, including those being assessed, and those that closed operations in 2009.

The City of Toronto also enters into agreements with industries that draw from private water supplies (e.g. Lake Ontario, ground water) and only require a sanitary collection service. For these industries, water is not purchased but it still requires treatment. Therefore, a special fee is applied to the volume of wastewater discharged to the sanitary sewer for treatment. There are two types of agreements: (i) long-term agreements, also known as Sanitary Discharge Agreements, and (ii) "one-time" short term permits which generally apply to site decontamination/decommissioning work. There were 37 Sanitary Discharge Agreements and 21 short term permits issued in 2009. The short term permit is issued with a flat fee of \$500. The Sanitary Discharge Agreements brought in revenues of approximately \$240,000. The wastewater quality received from the customers using private water supplies must meet existing Sewers By-law parameters; if not, the industry may also need to enter into an IWSA.

(3) Compliance Programs

The Sewers By-law has a provision that allows a company which requires additional time to obtain the necessary assessment or equipment to remedy the factors contributing to the violation to enter into a formal Compliance Agreement with the City. This enables the company to discharge to the sanitary sewer under new temporary parameter limits while taking the required corrective action based on strict conditions and timelines, as defined in the agreement, to address and resolve the problem.

In 2009, there were 26 facilities with compliance agreements. These companies need to be in full compliance with the terms and conditions of their new agreements including submission of quarterly progress reports. Failure to do so may result in amendments and/or termination of the initial agreement which is signed by each party.

(4) Grease Issues

Grease build up in the City sewers is an ongoing problem despite the continuous effort of grease trap inspections performed by Toronto Water Provincial Offences Officers. Grease blockages can create potential health concerns by attracting rodents, causing sewer back-ups, and other problems. In an effort to alleviate the problem, restaurant and industries with large volumes of grease production were targeted by staff for inspections in 2009. Toronto Water also developed a brochure in multiple languages, and distributed them to residential households for information and tips on how to handle and minimize the release of grease into sewers.

Other efforts involved Toronto Water and Toronto Public Health (TPH) working closely together. In 2007, a pilot project was established to ensure that restaurants installed and maintained grease traps at their facility. The project involved inspections of restaurants in the downtown core. Toronto Public Health would check for the presence or absence of grease traps during restaurant inspections under the Dine Safe Program. Restaurants without grease traps, or those with a history of sewer backups, would be referred to Toronto Water for a further detailed inspection and enforcement if needed. The pilot project in the downtown area was seen as a success and was expanded to include Scarborough area restaurants in 2009. Toronto Water received 261 referrals in 2009 compared to 63 that were received in 2008.

The success of the joint project was recognized by the City of Toronto as Toronto Water and Toronto Public Health received the Toronto Innovation Awards of Excellence, under the partnership category, for their cooperative efforts.

(5) Spills & Complaint Response / Customer Service Response

Toronto Water Provincial Offences Officers are on a rotating weekly schedule responsible for responding to complaint calls requiring By-law enforcement. In addition, Toronto Water also has a night/weekend shift and on-call Officers to respond to discharge complaints/spills to ensure 24 hour coverage. Examples of complaints may include a resident dumping paint into a street catch basin or a resident reporting foam or discoloured water in a creek. Toronto Water uses customer service metrics to measure the percentage of customer calls responded to within

2 hours. In 2009, staff received and attended to 232 complaints/spills. To date, staff have a 99% response rate for responding to these calls in a timely manner, providing a high level of customer service.

The requirements for the discharge of swimming pool water were amended in the Sewers By-law in 2008 to clearly outline the parameters that must be met and the procedure that must be followed when discharging from a residential swimming pool. Toronto Water Officers respond to swimming pool complaints on a regular basis especially in spring for the opening of pools and in autumn for the closing of pools. There were 33 swimming pool complaints that Toronto Water Officers responded to in 2009 out of the total 232 complaints. Residential complaints are addressed as an opportunity to educate the public on the Sewers By-law and the requirements for discharging into the sewer system.

(6) Industrial Water Rate - Block 2

Based on Council's decision to offer a lower Block 2 Water Rate, industrial customers can receive a lower industrial rate if they have an industrial tax classification and consume water in excess of 6,000 m³ per year and use the water for industrial or manufacturing processes. Additionally, to receive the lower Block 2 Rate, the industrial customer must continue to comply with the Sewers By-law and submit both an acceptable Water Conservation Plan and subsequent annual progress reports by July 1st of each year. If any of these conditions are not met, the customer loses the benefit of the Block 2 Rate and reverts back to paying the higher Block 1 Rate.

If an industry does not comply with the Sewers By-law they will be issued an NOV. The industry is allowed up to two (2) NOVs issued within a given year and still has the opportunity for reinstatement to the Block 2 Rate, once compliance is achieved as determined by Toronto Water. If the customer is issued a third NOV in the same year, the customer will be deemed a 'habitual offender' and loses the Block 2 Rate for a year. Before becoming eligible to return to the Block 2 Rate, the industry will be required to comply with the Sewers By-law for 12 consecutive months from the date of issuance of the third NOV.

Toronto Water takes a proactive approach to encourage industries to stay on the Block 2 rate program. Industries that have received a second NOV are scheduled for meetings with the unit manager to discuss a compliance program and/or other solutions that would correct their non-compliance.

To date, 81 industries have fulfilled the requirements for receiving the Block 2 Water Rate. As of December 31, 2009, 66 industries remained in compliance and 15 industries were not in compliance and therefore lost the Block 2 rate.

(7) Liaison with Provincial Ministries

Special effort has been made to further enhance a positive working relationship with the Ministry of Environment local Toronto District Office who inspects similar industries in the City of Toronto. Several "meet and greet" events were organized and held to promote information sharing and partnering between Toronto Water and the local MOE office.

In 2009, Toronto Water also approached the Ministry of Agricultural Food and Rural Affairs (OMAFRA) to develop a working relationship in regard to meat processing facilities in Toronto. A gap analysis was performed to ensure that all facilities licensed by OMAFRA were part of the Toronto Water database and vice versa. Inspections of meat processors not previously identified in the database started in 2009.

(8) Auditor General Recommendations

The Auditor General (AG) in his November 4, 2008 report to the Audit Committee recommended that Toronto Water review inspection and sampling targets to ensure that they are reasonable given risks to pollute and the staff resources available. A number of changes have been made since the 2008 Audit to ensure targets and metrics are met. Examples include re-assignment of areas to officers, using two dedicated Provincial Offences Officers for speciality sectors and the creation and implementation of a streamlined inspection checklist form. An assessment of the inspection and sampling metrics is still under review as a result of these changes and the additional requirement of Provincial Offences Officers addressing Water Supply By-law issues. Information will be reported once a complete assessment and review has been performed.

The Auditor General recommended that Toronto Water, in consultation with the Economic Development, Culture and Tourism (EDCT), determine whether EDCT's on-line application, Bizpal, could be used to communicate to business owners the Sewers By-law requirements, such as pollution prevention plans in addition to the business licensing requirements. In March 2009, Toronto Water's P2 requirements were added to Bizpal and in May 2009 the requirements for grease traps at food processors and restaurants were added.

(9) Pollution Prevention (P2) Plan Program

Toronto is the only City in Canada with a Sewers By-law that requires Industrial, Commercial and Institutional (ICI) facilities to prepare mandatory Pollution Prevention (P2) Plans. These plans identify ways to avoid, reduce or eliminate the creation of subject pollutants at the source. Currently, full P2 Plans are required to be submitted by ICI sector firms every six years.

In 2009, Toronto Water reviewed 1,023 P2 Plans. Failure to submit a P2 Plan results in the issuance of an NOV. Also, any P2 plan submitted which does not meet the By-law requirements can be rejected (via NOV). In 2009, 36 plans were rejected. As noted earlier in the report, the first prosecution and conviction of a company for failing to submit a P2 plan occurred in 2009.

It should be noted that the current Sewers By-law only requires the preparation and submission of P2 Plans and not the implementation of those Plans. When the P2 Program was incorporated into the Sewers By-law, authority did not exist under the former Municipal Act to enforce implementation of P2 Plans. A legal review is currently underway to determine if such authority exists under the *City of Toronto Act, 2006*.

For some industries, the second six year cycle for reporting P2 Plans to the City started in June 2007, while other establishments had a June 2008 submission deadline. Based on past experience, during the initial P2 Plan submission phase, there is a period of time required to meet with companies so as to raise the compliance percentages. As many establishments are still in the initial stages of the second six year cycle, higher compliance percentages for 2009 have not yet been achieved. As site inspections are undertaken, it is anticipated that the level of compliance will increase. Further, it is a challenge for industry to remember their obligation to re-submit a new plan 6 years later and there are also administrative challenges to the City including the need to follow-up with approximately 6,000 companies. There is currently only one dedicated program staff member for P2.

Table 3 highlights the industry statistics with respect to the percentage of P2 plan submissions received by the City. The 2007 percentage is the cumulative compliance over the 6 year cycle that started in 2001.

Table 3: Pollution Prevention - Industry Statistics Related to Reporting

Organization Type	No. of Facilities	P2 and BMP Compliance Rate		
		2009	2008	2007
Autobody Refinishing (AR)	547	55%	49%	97.9%
Automotive Services (SE)	2615	46%	44%	69.4%
Dental Offices (Dent)	1765	79%	57%	96.9%
Photo Labs	218	58%	54%	98.1%
Metal Finishing	116	96%	95%	45.8%
Printing	330	58%	53%	92.4%
Non Sector	12	94%	92%	90.0%
Manufacturing	185	70%	66%	96.9%
Dry Cleaners & Commercial Laundry	235	99%	99%	95.9%
Textile and Industrial Laundry	40	83%	55%	100%
Hospital/Health Care	39	79%	77%	100%
Total	6102			

Certain commercial operations are required to follow Best Management Practices (BMP) which provides a number of “do’s and don’ts” designed to improve effluent quality of that particular commercial operation. The BMP, when followed, minimizes the release of pollutants to the sewer system. This approach has proven to be more effective for smaller businesses, rather than submitting P2 Plans. Businesses that follow a BMP include photofinishing, automotive repairs, gas stations and vehicle wash facilities.

As requested by the Public Works and Infrastructure Committee at its June 3, 2009 meeting, Toronto Water undertook a survey of businesses using Best Management Practices. Headquarters and associations of automotive and photofinishing industries were requested to survey their members to determine compliance with the provisions set forth by the Best Management Practices. The survey brought to the forefront the environmental compliance requirements and responsibility of headquarters, associations and its members. Many headquarters, such as car manufacturers, could not perform the survey as they have no

authority over the dealerships, which are generally independently owned and operated. Others refused to participate in the voluntary survey. Table 4 below illustrates the results of the survey.

Table 4: Results of a Survey of Headquarters and Associations

Organization Type	Total Number of headquarters	Total Number of Facilities surveyed	Number of Responses Received	Percentage of responses received	Percentage of responses in reported compliance
Automotive Services (SE)	5	588	41	7%	100%
Photo Labs	5	136	88	65%	97%
Total	10	724	129		

(10) Storm Sewer Outfall Monitoring Program

At its meeting on November 5, 2005, the Works Committee directed that an annual report be submitted on the status of the Outfall Monitoring Program (OMP). The previous progress reports can be reviewed at the following links:

<http://www.toronto.ca/legdocs/2005/agendas/committees/wks/wks051108/it002b.pdf>
<http://www.toronto.ca/legdocs/2006/agendas/committees/wks/wks060911/it061.pdf>
<http://www.toronto.ca/legdocs/mmis/2007/pw/bgrd/backgroundfile-8876.pdf>
<http://www.toronto.ca/legdocs/mmis/2009/pw/bgrd/backgroundfile-21575.pdf>

In 2009, despite the labour disruption from June 22 to July 30, 2009 and a large amount of rainfall (OMP is highly dependent on weather) during the summer season when the program is at its peak, much was accomplished. Table 5 compares some key statistics for the Outfall Monitoring Program in 2008 and 2009.

Table 5: Comparison of Cross Connections Found and Corrected, Priority Outfalls, Outfalls of Concern, during 2008 and 2009

YEAR	2009	2008
Precipitation (mm)	879.9	1054.9
Cross Connections Found	315	46
Cross Connections Corrected	312	51
Priority Outfalls	53	53
Outfalls of Concern	0	37
De-listed Priority Outfalls	17	6

In 2009, Toronto Water continued the survey and sampling of Highland Creek outfalls from 2008 and also completed the survey of outfalls from Mimico Creek. One full round of sampling was completed at Highland creek outfalls under dry weather conditions. Due to the size of the Highland Creek watershed, and the labour disruption, another round of sampling for all outfalls displaying a dry weather flow will continue into 2010. Sampling at Mimico Creek

dry weather flow outfalls is expected to start in 2010. Refer to Table 6 for a summary of the outfalls surveyed for each watershed and the number that had a dry weather flow.

Table 6: Survey of Highland Creek and Mimico Creek Outfalls

Watershed	Survey Started	Survey Completed	Outfalls Surveyed		Total Outfalls	Outfalls with Dry Weather Flow
			2009	2008		
Highland Creek	2008	2009	370	333	703	416
Mimico Creek	2009	2009	213	NA	213	105

In 2009, Toronto Water performed 2,196 outfall related inspections and conducted 1,274 storm sampling events that resulted in 14,087 laboratory analyses related to storm water quality monitoring. From these activities, a total of 19 Notices of Violation (NOVs) were issued for non-compliance with the Sewers By-law (storm section). Furthermore, all 2008 Outfalls of Concern were classified as either Priority Outfalls or removed from the active list. This resulted in another 17 Priority Outfalls being added to the Priority list.

At the beginning of 2009, there were a total 53 Priority Outfalls. During 2009, Priority Outfalls within Black Creek (BC), Don River (DR), Etobicoke Creek (EC), Highland Creek (HC), Lake Ontario (LO), Rouge River (RR) and Taylor Massey Creek (TMC) watersheds were investigated. The investigations lead to 193 property dye tests and the discovery of 315 cross connections (refer to Appendix C - Table 1). In 2009, 312 cross connections were corrected and this included 4 carried over from the previous year. As a direct result of these corrections, 17 Priority Outfalls were de-listed from the Priority list. Refer to Appendix C - Table 2 for a list of de-listed priority outfalls in 2009 and the corresponding watershed and Appendix C - Table 3 for a summary of priority outfalls and de-listed outfalls for 2008 and 2009.

Toronto Water continued to actively use CCTV (Closed Circuit Television) to aid in detecting cross connections in sewer systems. Suspected cross connections are normally detected by dye testing stretches of sewer lines (up to whole streets) through dye test appointments arranged with property owners. With CCTV, staff can visually narrow the source of contamination by viewing main and lateral sewer lines. This makes sewer tracing investigations more targeted and cross connection detection became more accurate, saving significant time and resources. As a result, 24 property dye tests were performed with the aid of CCTV, and 13 cross connections were found in 2009.

To date, the program has discovered 484 cross connections, corrected 470 of these and de-listed 30 priority outfalls since its inception. This has significantly improved the storm water quality flowing from the City's storm sewer system into its surrounding drainage areas.

(11) Collaborative Surface Water Monitoring Programs

The Beaches Program is a joint effort between Toronto Water and Toronto Public Health. Every year, samples are collected at all 11 designated beaches and E. coli testing is performed

on the samples to determine beach water quality. Toronto Public Health then posts whether it is safe or unsafe to swim at a particular beach based on the sampling results. Toronto Water also manages a Lake Ontario Monitoring Program where several samples are collected for water quality along the City of Toronto's waterfront and the Inner Harbour. In 2009, Toronto Water collected a total of 8,281 samples along the waterfront and within the Inner Harbour. Also in 2009, Toronto Water implemented the Sunnyside Beach curtain pilot project. The project involves using a barrier to deflect pollution plumes from the shoreline. The water quality was monitored in the same manner as other beaches. Another project Toronto Water is involved with is the Road Salt Study, which is a joint study between Toronto Transportation Division and the University of Guelph. Strategic monitoring stations have been installed along Highland Creek and sampling is done year round. The study monitors the amount of salt contributed by road salt runoff from de-icing efforts during the winter. Finally, Toronto Water is providing monitoring services for the Don Trunk Environmental Assessment (EA) Project. This involves monitoring the water quality of the Don River upstream and downstream from the North Toronto Wastewater Treatment Plant. The baseline data from the study will be used to further assess the capacity of the Don Trunk sewer system for future expansion.

CONTACT

Diane Sertic, Supervisor
Environmental Monitoring & Protection
Toronto Water
(T) 416-392-3489
(F) 416-392-9338
dsertic@toronto.ca

Joanne Di Caro, Manager
Environmental Monitoring & Protection
Toronto Water
(T) 416-392-2929
(F) 416-392-9338
jdicara@toronto.ca

SIGNATURE

Lou Di Gironimo
General Manager, Toronto Water

ATTACHMENTS

Appendix A: 2009 Sewers By-law Convictions
Appendix B: Industrial Waste Surcharge Agreement Status
Appendix C: Outfall Monitoring Program Summary

Appendix A:

2009 Sewers By-law Convictions

Conviction Date	Company	Ward	No. of Parameters	Reasons	Total Fine Amount (excluding 25% – Victim Surcharge)	Positive Outcome of Prosecution
1/20/2009	Quantex	30	6	Sanitary limit exceeded for : (Copper, Zinc), Storm (Copper, Zinc, Benzene, Toluene)	\$17,000	Increased Monitoring. Testing new equipment to remove VOCs. Proposal to take steps to meet the By-law limits.
5/4/2009	Global Upholstery Co. Inc	8	1	Failing to report a spill to a sewage works (storm sewer)	\$3,000	Maintains proper spills response protocol on site & trained staff on how to contain spills properly.
6/10/2009	Tiffany Gate Foods	1	1	Sanitary limit exceeded for : Oil & Grease	\$1,500	Company increasing grease trap maintenance program at facility and established contract with recycler of grease
11/10/2009	Eastend Plating Co. Ltd.	42	3	Sanitary limit exceeded for: Zinc (2), P2	\$15,000	Prohibition Order on zinc discharges above the By-law limit. First P2 Plan failure to submit prosecution Company working to address its wastewater.
					TOTAL \$36,500	

Appendix B:

Industrial Waste Surcharge Agreement Status

No.	Industry Name	Address	Ward	Status as of 2009
1	1562541 Ontario Ltd. (Rex Services)	100 Silver Star Blvd.	41	Active
2	1730500 Ontario Ltd. (Tofu Superior)	175 Weston Road	11	Active
3	3321061 Canada Inc.(Sunrise Soya Foods)	21 Medulla Avenue	5	Active
4	573349 Ont. Ltd. (The Butcher Shoppe)	121 Shornecliffe Road	5	Active
5	A. Lassonde Inc.	95 Vulcan Street	2	Active
6	Amsterdam Brewing Company Limited	21 Bathurst Street	20	Active
7	Atlantic Packaging Products Ltd.	350 Midwest	37	Active
8	Bank Bros. & Son Ltd.	116 Glen Scarlett Road	11	Active
9	BASF Canada Inc.	10 Constellation Court	2	Active
10	Beechgrove Country Foods	20 Minuk Acres	44	Active
11	Belmont Meat Packers Ltd.	230 Signet Drive	7	Active
12	Best Baking Inc.(Dufflet Pastries)	166 Norseman Street	5	Active
13	Bona Foods Limited	184 Toryork Drive	7	Active
14	Cadbury Adams Canada Inc.	40 Bertrand Avenue	37	Active
15	Cadbury Adams Canada Inc.	277 Gladstone Ave.	18	Active
16	Campbell Company Of Canada	60 Birmingham St.	6	Active
17	Canadian Linen and Uniform Service Co	24 Atomic Avenue	5	Active
18	Cappola Food Inc.	92 Cartwright Avenue	15	Active
19	Cargill Limited - Cargill Limitee	71 Rexdale Boulevard	2	Active
20	CCI-TBN Toronto Inc. (Solid Waste Div)	35 Vanley Cres	8	Active
21	Central - Epicure Ltd.	501 Garyray Drive	7	Active
22	Chai Poultry Products Inc.	115 Saulter Street	30	Active
23	Charlies Meat and Seafood Supply Ltd.	61 Skagway Avenue	36	Active
24	Chemtura Canada Co./CIE	36 Upton Road	35	Active
25	Chemtura Canada Co./CIE	10 Chemical Court	44	Active
26	Cintas Canada Limited	23 Torlake Cres.	6	Active
27	Cintas Canada Limited	3370 Dundas Street West	13	Active
28	Coca-Cola Bottling Ltd.	24 Fenmar Drive	7	Active
29	Color-Pak, a Division of Atlantic Packaging Products Ltd.	80 Progress Avenue	37	Active
30	Commercial Bakeries Corp.	45 Torbarrie Road	7	Active
31	Dels Pastry Limited	344 Bering Avenue	5	Active
32	DF Foods Mfg. Inc.	75 Vickers Road	5	Active
33	Dimpflmeier Bakery Limited	26-36 Advance Road	5	Active
34	DMX Plastics (Canada) Inc.	200 Hymus Road	35	Active
35	Dominion Colour Corporation	199 New Toronto Street	6	Active
36	Elbee Meat Packers Limited	1 Glen Scarlett Road	11	Active
37	Emery Oleochemicals Canada Ltd.	425 Kipling Avenue	6	Active
38	Faster Linen Service Limited	89 Torlake Crescent	6	Active
39	Fiera Foods Company	220 Norelco Drive	7	Active
40	Fiera Foods Company	50 Marmora Street	7	Active
41	Filicetti Foods Inc.	350 Garyray Drive	7	Active
No.	Industry Name	Address	Ward	Status as of 2009

42	G & K Services Canada Inc.	940 Warden Avenue	37	Active
43	Gay Lea Foods Co-Operative Limited	100 Clayson Road	7	Active
44	Gibson's Cleaners Company Limited	4241 Dundas St. W.	5	Active
45	Grande Cheese Company Ltd.	175 Milvan Drive	7	Active
46	Great Lakes Brewing Co. Ltd.	30 Queen Elizabeth Blvd.	5	Active
47	Griffith Laboratories Limited	757 Pharmacy Avenue	35	Active
48	GTAA	311 Corvair Drive	N/A	Active
49	Halltech Inc.	465 Coronation Drive	44	Active
50	Heng Lee Food Products Co. Ltd.	605 Middlefield Road, Unit 11	41	Active
51	Honeyman's Beef Purveyors	130 The West Mall	5	Active
52	International Cheese Ltd.	67 Mulock Avenue	11	Active
53	Kerr Bros. Limited	956 Islington Avenue	5	Active
54	KIK Operating Partnership	13 Bethridge Road	2	Active
55	KIK Operating Partnership	2000 Kipling Avenue	2	Active
56	KIT LP (Sequel Brand Foods)	61 Signet Drive	7	Active
57	Kraft Canada Inc.	2150 Lakeshore Blvd. W.	6	Active
58	Kraft Canada Inc.	370 Progress Avenue	37	Active
59	Kraft Canada Inc.	5 Bermondsey Road	31	Active
60	Kretschmar Incorporated	71 Curlew Drive	34	Active
61	Liberte Natural Foods Inc.	60 Brisbane Road	8	Active
62	Longlife of Canada Company Limited	180 Ormont Drive	7	Active
63	MacGregors Meat and Seafood Ltd.	265 Garyray Drive	7	Active
64	Maple Leaf Consumer Foods Inc.	150 Bartor Road	7	Active
65	Maple Leaf Poultry, a Member of Maple Leaf Foods Inc.	100 Ethel Avenue	11	Active
66	Marsan Foods Ltd.	160 Thermos Road	37	Active
67	Martha's Garden	475 Horner Avenue	6	Active
68	Maypole Dairy Limited	64 Fordhouse Boulevard	5	Active
69	McCain Foods Limited	55 Torlake Crescent	6	Active
70	Molson Canada 2005	1 Carlingview Drive	2	Active
71	Morrison Lamothe Inc.	399 Evans Avenue	6	Active
72	Morrison Lamothe Inc.	141 Finchdene Square	42	Active
73	National Dry Company Limited	30 Arrow Road	7	Active
74	Natrel (Ontario) Inc.	1275 Lawrence Ave E.	34	Active
75	Nestle Canada Inc.	72 Sterling Road	18	Active
76	Newalta Industrial Services Inc.	55 Vulcan Street	2	Active
77	Nitta Gelatin Canada, Inc.	60 Paton Road	18	Active
78	Oak Leaf Confections Limited	440 Comstock Road	35	Active
79	Open Window Bakery Ltd.	1125 Finch Avenue West	8	Active
80	Organic Resource Management Inc.	290 Garyray Drive	7	Active
81	Parmalat Dairy & Bakery Inc.	25 Rakely Court	3	Active
82	Pepe's Mexican Foods Inc.	122 Carrier Drive	1	Active
83	Pizza Pizza Limited	58 Advance Road	5	Active
84	Planway Poultry Inc.	26 Canmotor Avenue	5	Active
85	Portuguese Cheese Co. Ltd.	2 Buckingham Street	6	Active
86	Quantex Technologies Inc.	309 Cherry Street	30	Active
87	Redpath Sugar Ltd.	95 Queen's Quay East	28	Active
No.	Industry Name	Address	Ward	Status as of 2009
88	Rohm and Haas Canada Inc.	2 Manse Road	44	Active

89	Ryding- Regency Meat Packers Ltd.	70 Glen Scarlett Road	11	Active
90	Select Foods Products Limited	120 Sunrise Avenue	34	Active
91	SI Group-Canada Ltd.	309 Comstock Road	35	Active
92	Siena Foods Limited	16 Newbridge Road	5	Active
93	Smurfit-MBI (Image PAC)	730 Islington Avenue	6	Active
94	St. Clair Ice Cream Limited	2859 Danforth Avenue	32	Active
95	Steam Whistle Brewing Inc.	255 Bremmer Blvd	20	Active
96	Tencorr Packaging Inc.	188 Cartwright Avenue	15	Active
97	Tiffany Gate Foods Inc.	195 Steinway Blvd	1	Active
98	Topper Linen Supply Ltd. (north #1)	26 Mulock Ave	11	Active
99	Topper Linen Supply Ltd. (south #2)	24-36 Mulock Ave	11	Active
100	Toronto Abattoirs Limited	2 Tecumseth Street	19	Active
101	Toronto Linen Rental Inc.	62 Bartor Road, Unit 6	7	Active
102	Toryork Catering Limited	230 Milvan Drive	7	Active
103	Trillium Beverage Inc.	55 Mill St.	28	Active
104	Turtle Island Paper Co.	242 Cherry Street	30	Active
105	Unilever Canada Inc.	195 Belfield Road	2	Active
106	Univar Canada Ltd.	64 Arrow Road	7	Active
107	Victory Linen Supply Ltd.	165 Midwest Road	37	Active
108	Vienna Meats Products Limited	170 Nugget Avenue	14	Active
109	W.T. Lynch Foods Limited	72 Railside Road	34	Active
110	Wageners Meat and Delicatessen Limite	40-44 Six Point Road	5	Active
111	Wing Hing Lung Ltd.	50 Torlake Crescent	6	Active
112	Wing Loon Food Products Co., Ltd.	105 Howden Road	37	Active
113	Wing's Food Products	275 Albany Avenue	20	Active
114	Winsun Laundry and Linen Supply Ltd.	689 Warden Av. # 4 & 5	35	Active
115	Wrigley Canada Inc.	1123 Leslie Street	25	Active
116	Accurate Ceramics & Marble	182 Turbine Drive	7	Closed
117	Billy Bee Honey Products Limited	68 Tycos Drive	15	Closed
118	Korex – Don Valley.	21 Don Valley Pkwy	30	Closed
119	Nestle Canada Inc.	1500 Birchmount Street	37	Closed
120	Sensient Flavours Canada Inc	110 Vulcan Street	2	Closed
121	2168587 Ontario Ltd. O/A Upper Crust Bakery	55 Canarctic Drive	8	New Active Surcharge
122	Bento Nouveau Ltd.	19 Skagway Avenue	36	New Active Surcharge
123	Charlies Meat and Seafood Supply Ltd.	65 Skagway Avenue	36	New Active Surcharge
124	Chrysler Canada Inc.	15 Brown's Line	6	New Active Surcharge
125	CMS Ontario Limited	134 Norfinch Drive	8	New Active Surcharge
126	Future Bakery Limited	106 North Queen Street	5	New Active Surcharge
127	Give and Go Prepared Foods Corp.	6650 Finch Ave west	1	New Active Surcharge
128	Give and Go Prepared Foods Corp.	300 Humber College Boulevard	1	New Active Surcharge
129	Joriki Inc	3431 McNicoll Avenue	41	New Active Surcharge
130	Ms. Clean Laundry & Linen Services Inc.	25 Windsor Street	6	New Active Surcharge
131	Multi-National Manufacturing Ltd.	65 melford Drive	42	New Active Surcharge
132	New Forest Paper Mills LP	333 Progress Avenue	37	New Active Surcharge
133	Trillium Beverage Inc.	300 Midwest Road	37	New Active Surcharge
No.	Industry Name	Address	Ward	Status as of 2009
134	Precise Finishers Limited	1960 Ellesmere Road, Unit 13	38	New Active Surcharge (Phosphorus)
135	Andy's Sausage	170 Mulock Avenue	11	Possible Surcharge

136	Annette's Donuts	1965 Lawrence Avenue West	11	Possible Surcharge
137	Canada Bread Company (Corporate Foods)	35 Rakely Court	3	Possible Surcharge
138	Canadian Select Meats Inc.	145 Bethridge Road	2	Possible Surcharge
139	Dare Foods	143 Tycos Dr.	15	Possible Surcharge
140	Egg Solutions (Global Egg)	283 Horner Avenue	6	Possible Surcharge
141	Golden Cut Poultry Ltd.	42 Taber Road	2	Possible Surcharge
142	Hung Wang Foods	751 Warden Avenue	35	Possible Surcharge
143	Korex Canada	104 Jutland Rd	5	Possible Surcharge
144	Owens-Corning Canada Inc.	3450 McNicoll Ave	41	Possible Surcharge
145	Perfect Poultry Inc.	239 Toryork Drive	7	Possible Surcharge
146	Ready Bake Foods	675 Fenmar Drive	7	Possible Surcharge
147	Shefa Meats Ltd.	195 Brdigeland Ave	15	Possible Surcharge
148	Shelmac Brand Products	1289 Caledonia Rd	15	Possible Surcharge
149	Stonemill Bake House Ltd.	426 Nugget Ave	41	Possible Surcharge
150	Surati Sweets	26 Carnforth Road	34	Possible Surcharge
151	Tofu Products Company	31 Windsor Street	6	Possible Surcharge

Note: Possible Surcharges are companies that have had the assessment completed and agreements will be issued in 2010.

Appendix C:

Outfall Monitoring Program Summary

Table 1: Cross Connection Summary (January 1 – December 31, 2009).

Watershed	Cross Connections Found²	Cross Connections Corrected³
Black Creek	6	6
Don River	3	3
Highland Creek	1	1
Humber River	1	1
Lake Ontario	2	2
Mimico Creek ¹	286	286
Taylor Massey Creek	15	12
Rouge River	1	1
TOTAL	315	312

¹ The result of cross connections from 2 condominium buildings containing 137 and 149 residential units.

² Of the total cross connections found, 307 were residential, 5 were commercial, 1 was institutional and 2 were sewer infrastructure problems.

³ Of the total cross connections corrected, 304 were residential, 7 were commercial, and 1 was a sewer infrastructure problem.

Table 2: Priority Outfalls removed / delisted from the Priority Outfall List in 2009

Outfall ID	Watershed	Ward
BC05-1	Black Creek	11
BC17	Black Creek	11
BC18	Black Creek	11
BC29-13	Black Creek	11
BC150	Black Creek	9
TG71	Don River	25
TH131	Don River	16
EC04	Etobicoke Creek	6
EC33	Etobicoke Creek	3
TC17	Taylor Massey Creek	31
TC22	Taylor Massey Creek	31
TC26	Taylor Massey Creek	31
TC30	Taylor Massey Creek	31
TC46	Taylor Massey Creek	35
TC69	Taylor Massey Creek	35
TC91	Taylor Massey Creek	37
TC117	Taylor Massey Creek	40

Table 3: Comparison of Priority Outfalls, Outfalls of Concern, and De-listed Outfalls during 2008 and 2009

Watershed	Priority Outfalls as of Dec. 31, 2008	Priority Outfalls Delisted in 2009	Priority Outfalls as of Dec. 31, 2009	Priority Outfalls Delisted since start of OMP	Outfalls of Concern as of Dec. 31, 2008	Outfalls of Concern as of Dec. 31, 2009
Black Creek	12	5	11	6	15	0
Etobicoke Creek	3	2	1	2	1	0
Don River	3	2	2	2	8	0
Highland Creek	1	0	1	0	0	0
Humber River	1	0	1	0	0	0
Lake Ontario	1	0	1	0	0	0
Mimico Creek	0	0	0	0	0	0
Rouge River	3	0	3	0	3	0
Taylor-Massey Creek	29	8	33	20	10	0
TOTAL	53	17	53	30	37	0