TORONTO

STAFF REPORT ACTION REQUIRED

Sewers By-law Pollution Prevention (P2) Program Stakeholder Update – 2015 and Sewers and Water Supply By-law Amendments

Date:	October 22, 2015
To:	Public Works and Infrastructure
From:	General Manager, Toronto Water
Wards:	All
Reference Number:	P:\2015\Cluster B\TW\PWI15024

SUMMARY

In 2013, City Council directed the General Manager of Toronto Water to undertake consultations regarding proposed changes to Toronto Water's Pollution Prevention ("P2") Program and Sewers By-law, specifically:

- the creation of a subject pollutant threshold reporting list (i.e. pollutants that are subject to regulation);
- changes to the dental office P2 submission requirements,
- addition of a Best Management Practice ("BMP") for restaurants with the requirement to adhere to the CSA Standard B481 Series-12 Grease interceptor;
- addition of a BMP for the automotive refinishing sector (autobody shops); and
- addition of a BMP for mobile washing business operations.

This report summarizes the results of the stakeholder consultations and provides recommendations in connection with the proposed changes to Toronto Water's P2 Program and Sewers By-law including by-law amendments, adoption of codes of practice, reporting documents and best management practices. The recommendations in this report are oriented to: (i) maintain and ensure proactive environmental protection; and (ii) remove only redundant regulatory reporting requirements on industry.

Of the five proposed changes, the mobile washing business operations will require further consultation due to issues identified by effected stakeholders that need to be addressed by the City. Additionally, Toronto Water took the opportunity to review the Sewers By-law (Municipal Code Chapter 681) and Water Supply By-law (Municipal Code Chapter 851)

and identified clarification and enforcement enhancement amendments for City Council's consideration and approval.

RECOMMENDATIONS

The General Manager, Toronto Water, recommends that:

1. Municipal Code Chapter 681-Sewers and Municipal Code Chapter 851–Water Supply be amended substantially in accordance with the draft amending By-law attached as Appendix "A" to this report.

2. City Council approve the Food Service Establishment Environmental Code of Practice document attached as Appendix "B" for industrial operations where food is cooked, heated, processed or prepared and that the General Manager of Toronto Water be authorized to implement the new Food Service Establishment Environmental Code of Practice Program as described in this report.

3. City Council approve the Best Management Practice document attached as Appendix "C" for facilities in the automotive service sector: Automotive Repair Operations, Automotive Refinishing Operations (Autobody Shops), Vehicle Wash Operations and Petroleum Facilities and that the General Manager of Toronto Water be authorized to implement the amended Best Management Practice Program as described in this report.

4. City Council direct the General Manager, Toronto Water, to continue stakeholder consultations throughout 2016 regarding the proposed changes to the Sewers By-law in relation to the addition of a new Environmental Code of Practice for mobile washing business operations, and report back to the Public Works and Infrastructure Committee in 2017.

Financial Impact

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

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

DECISION HISTORY

At its April 18, 2012 meeting, the Public Works and Infrastructure Committee ("PWIC") requested from the General Manager of Toronto Water a report regarding the administration of the Sewers By-law and also requested the General Manager to report back on additional parameters for P2 planning. The decision and link can be found at: http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2012.PW14.1

The General Manager of Toronto Water submitted a report titled "Sewers By-law Administration – Response to Request for Information" at the PWIC on October 11, 2012.

City Council subsequently adopted the staff report recommendations on November 27, 28, and 29, 2012 with two amendments and authorized staff to consult with the City's water stakeholders on the feasibility of adding of hexavalent chromium as a subject pollutant, under the Sewers By-law for P2 planning purposes and to report back in 2013.

PWIC also requested that the General Manager of Toronto Water report back on examples of successful P2 reductions since the P2 program started, which sectors have not been successful in implementing P2, and recommendations for improving the success of P2 plans.

The decision and link to the report and appendices can be found at: http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2012.PW18.1

The General Manager of Toronto Water submitted a report titled "Sewers By-law Pollution Prevention (P2) Program and Hexavalent Chromium Stakeholder Update" at PWIC on November 20, 2013. City Council adopted recommendations on December 16, 2013 with two amendments and authorized staff to consult with the City's water stakeholders on the five proposed changes to the Pollution Prevention (P2) Program (and subsequent Sewers By-law, Municipal Code Chapter 681) and report back in late 2015.

The decision and link to the report and appendices can be found at: http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2013.PW27.8

PWIC also requested that the General Manager of Toronto Water report back to the March 4, 2014 meeting of PWIC on a risk-based program to report the performance of all 38 subject pollutants covered by the Sewers By-law. In response, the General Manager of Toronto Water, submitted a report titled "Sewers and Water Supply By-laws 2013 Compliance and Enforcement Annual Report" at PWIC on August 13, 2014, which included the requested information on the 38 subject pollutants.

The decision and link to the report and appendices can be found at: http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2014.PW33.18

COMMENTS

After 15 years of experience with the P2 Program, Toronto Water is recommending program revisions to five key components of the P2 Program to facilitate improvements. The revisions for each of those five key program components are discussed below and include a summary of the key input from stakeholders.

A description of the comprehensive stakeholder input and feedback process is enclosed with this report as Appendix D. It includes a list of the external and internal bodies consulted, which range from industry representatives, environmental groups to regulatory bodies.

Subject Pollutant Threshold Reporting List

Currently, the Sewers By-law requires every industrial, commercial and institutional ("ICI") facility discharging any amount of subject pollutant to submit a P2 Plan to Toronto Water acknowledging the discharge of that subject pollutant and identifying the steps that may be taken to reduce, substitute or eliminate that subject pollutant. Accordingly, even trace amounts of a subject pollutant may trigger a P2 Plan reporting requirement. Such discharges are generally within the sewer discharge limits in the Sewers By-law and, therefore, permitted.

The P2 Program was a pioneering municipal program and since its inception 15 years ago, laboratory analytical techniques have substantially improved and will continue to improve. The any amount value has and will continue to decrease to more and more decimal places thereby creating a moving target based on trace amounts.

To eliminate the necessity to submit a P2 Plan where only a trace amount of a subject pollutant is present, it is recommended that a threshold limit be created for each subject pollutant before P2 Plan reporting is required. This will not affect discharge limits in the Sewers By-law which remain unchanged.

For example, trace amounts of chromium can be found in a broccoli washing operation where it is naturally present in the vegetable. Reporting in such circumstances is not viable for the business nor necessary, in the circumstances, for Toronto Water.

Under this proposal, businesses would report on subject pollutant(s) that are detected over the proposed 25% threshold limits, allowing businesses and the City to then allocate resources away from trace amounts of subject pollutants to more problematic pollutants/issues and high risk discharges. The cost of preparing P2 Plans for small businesses can be as much as $10,000 as they must use a specialized consultant.

25% Threshold

The proposed subject pollutant reporting threshold list is based on 25% of the sanitary sewers discharge limits and can be found in Table 3 of Appendix A of this report. The Sewers By-law amendments required to implement this change are in Appendix A and further explanation of these amendments is in Appendix E.

For PCBs and pentachlorophenol parameters, the lowest level of detection the Toronto Water laboratory can identify will be used instead of using a threshold limit of 25% of the sanitary sewers discharge limits as doing so would create a threshold below the level the Toronto Water laboratory can currently identify. The sanitary sewer discharge limits were used over the storm sewer discharge limits, which are more stringent, as not all subject pollutants have storm limits.

This percentage based approach is considered a risk-based practice and recommended by consultants during stakeholder discussions. Toronto Water looked at various threshold scenarios from 5% to 75% of the sanitary sewers discharge limits. Table 1 on this page, below, depicts the reduction in the number of facilities having to report based on a 10%, 15% and 25% threshold. It was decided that 25% was an optimum threshold limit to eliminate trace amounts and at the same time maintain the proactive element of the P2 Program.

At a 25% threshold, there will be a 21% reduction in the number of companies having to report. Any higher threshold (i.e. 50% or 75% as suggested by industry) would be unacceptably high and eliminate more than just reporting of trace amounts. This table only indicates the number of companies that would no longer have to submit P2 Plans at all. It does not indicate the number of companies still required to submit P2 Plans but on fewer subject pollutants due to some no longer exceeding the threshold.

Table 1: Subject Pollutant Threshold Scenarios

Threshold Scenarios	Number of Businesses	Reduction (compared to 629)
Number of businesses with sample results above the lowest level of detection the Toronto Water lab can identify	629	N/A
Number of businesses exceeding 10% threshold value	559	70 or 11.1%
Number of businesses exceeding 15% threshold value	534	95 or 15.1%
Number of businesses exceeding 25% threshold value	495	134 or 21.3%

Many government reporting programs in Canada and Ontario, have threshold limits to eliminate the reporting of trace amounts. These programs include:

- Toronto Public Health's (TPH) ChemTRAC
- Environment Canada's National Pollutant Release Inventory (NPRI),
- Ontario Ministry of the Environment and Climate Change (MOECC)'s Airborne Contaminant Discharge Monitoring and Reporting Regulation – Ontario Regulation 129/01 and the Toxics Reduction Act (2009) and its regulation

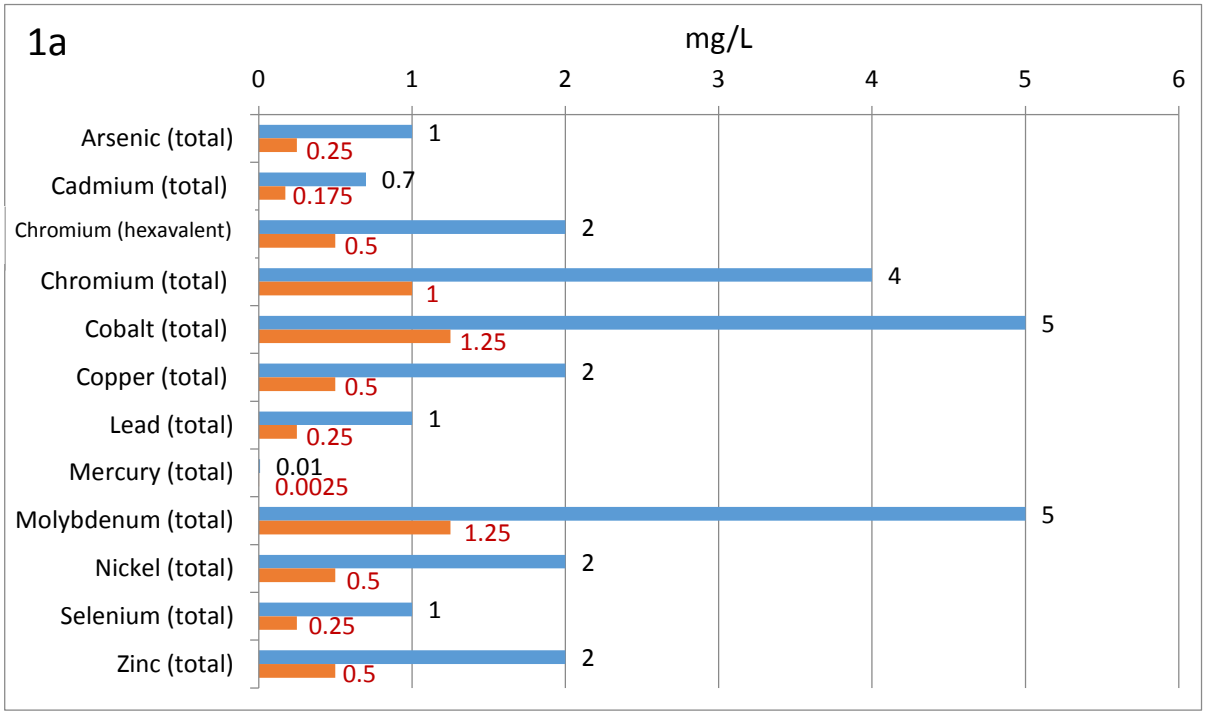
In Toronto, the TPH ChemTRAC program was introduced in 2010, ten years after the P2 Program and from its inception included a "Priority Substances and Reporting Thresholds Table" based primarily on the NPRI reporting program that eliminates the need for trace amount reporting. TPH wanted the ChemTRAC Program to capture smaller facilities and created their thresholds accordingly by pulling some limits directly from NPRI and adjusting other limits (i.e. ten times below NPRI). In addition, the ChemTRAC Program created a "Chemical Sources Exempt from the Bylaw Table" providing conditions in which businesses would not have to report (i.e. emission from space heaters or hot water heaters that are not part of the process equipment).

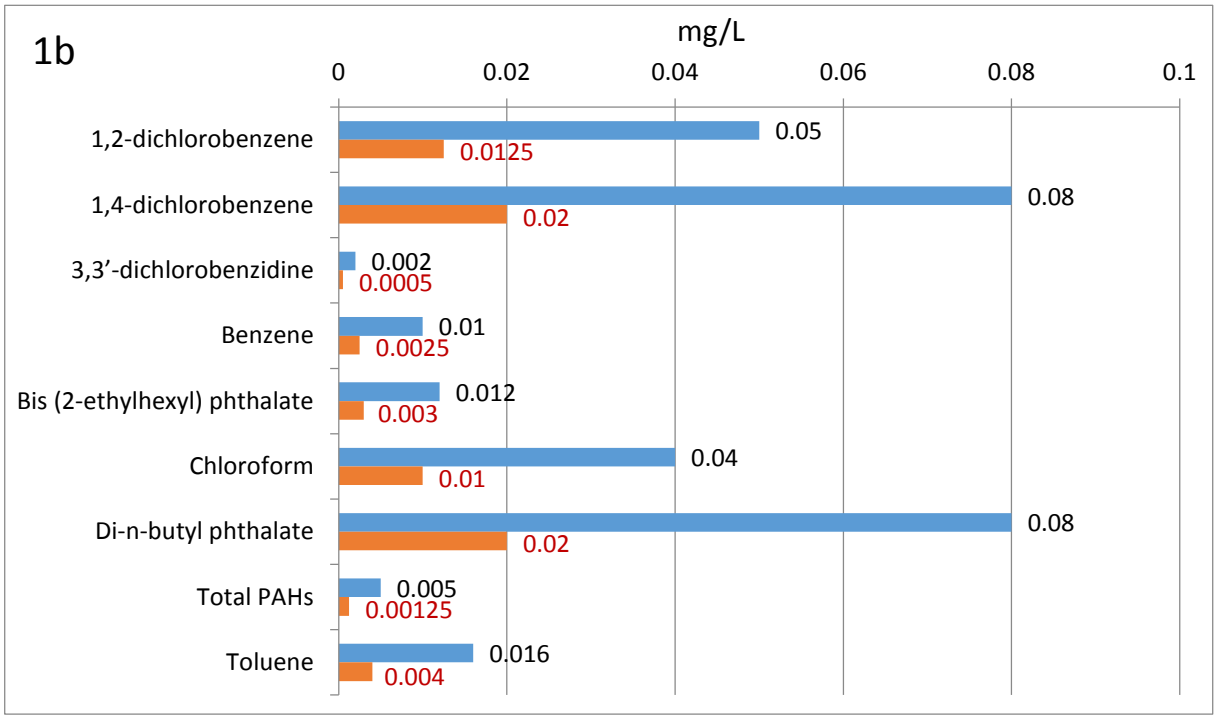
Environment Canada's NPRI Program was introduced in 1993 and at that time set a standard default threshold at 10 tonnes of a listed substance manufactured, processed or otherwise used. This standard threshold was based on the U.S. Toxics Release Inventory. Over time, as more and more data was collected with the standard thresholds in place, different threshold levels for specific substances on the NPRI list were established with the general intent to capture an appropriate level of coverage of releases and disposals of the substances from facilities, while not unduly burdening facilities by requiring they track insignificant quantities.

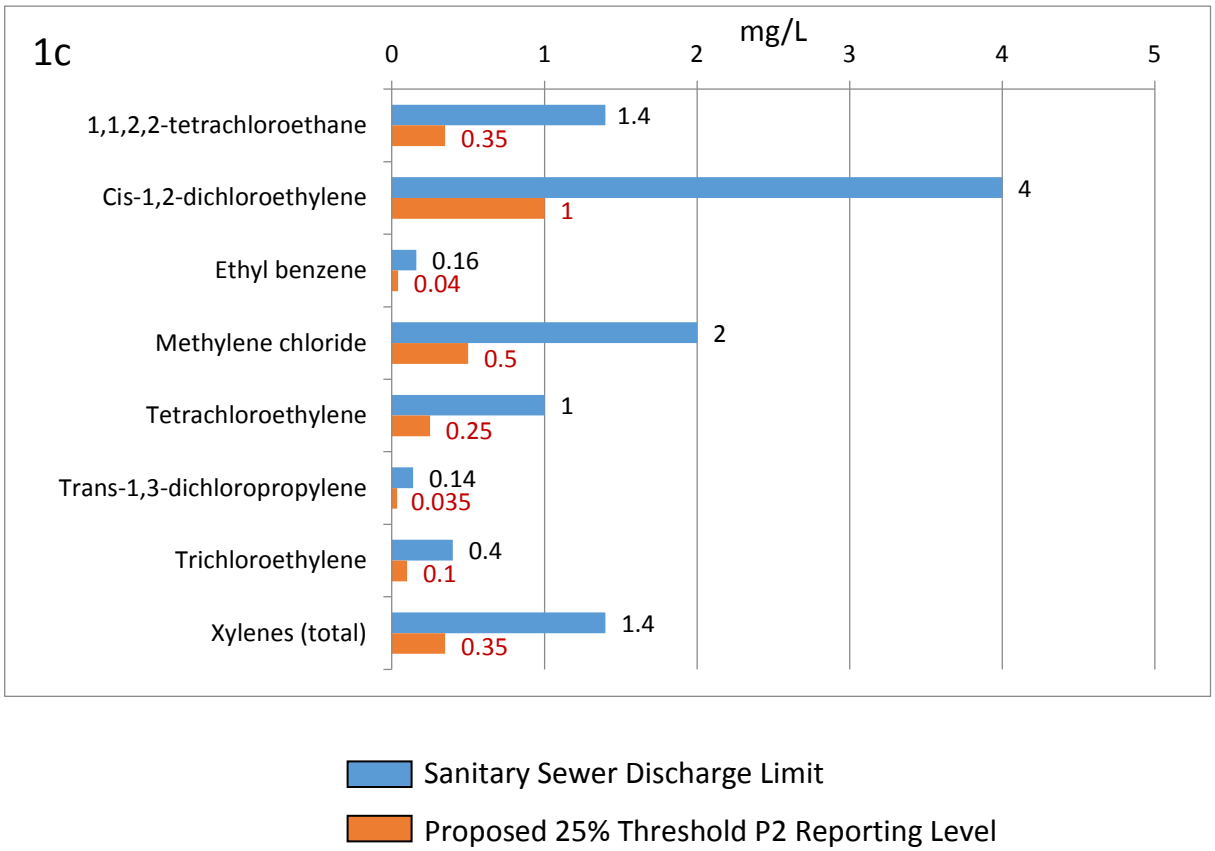
The proposed subject pollutant P2 Plan reporting threshold list should not have any negative impact on wastewater pollutants and the biosolids quality collected at wastewater treatment plants as the sewer discharge limits in the Sewers By-law are not being changed.

Figures 1a – 1c depict the difference between the *discharge* limits and proposed *reporting* limits of each subject pollutant. Three separate graphs were created to account for the different scales of measurement (mg/L), hence values below 0.1 mg/L were grouped into one graph (1b), and heavy metal subject pollutants were grouped into its own (1a). Toronto's Sewers By-law sanitary *discharge* limits are the most stringent in Canada and other municipalities have adopted some of the limits based on Toronto's Sewers By-law.

Figures 1a – 1c: Sanitary Sewer Discharge Limits and Proposed 25% Threshold Reporting Limit Comparison







Removal of Pesticides and Prohibition of Discharge

The current subject pollutant threshold reporting list includes seven pesticides. Toronto Water is proposing that 6 of these 7 pesticides, which are known as legacy pesticides, be removed from the subject pollutant list and instead be prohibited from discharge to the municipal sanitary or storm sewers under the Sewers By-law. This represents a zero tolerance approach on these pesticides. The six pesticides which would be removed from the subject pollutant list include: aldrin/dieldrin, chlordane, DDT, mirex, hexachlorobenzene and hexachlorocyclohexane (also known as lindane).

Five of the six noted pesticides have been banned in North America over the last 30 to 50 years (hexachlorobenzene since the 1960s, DDT and mirex since the 1970s and aldrin/dieldrin and chlordane since the 1980s) and cannot be manufactured or imported for any use. The sixth noted pesticide, hexachlorocyclohexane, had its use restricted to canola seed treatment and in low concentrations to a non-prescription drug for the treatment of lice and scabies. It was banned from being used in canola seed treatment in the early 2000s and is no longer in commercial use according to the MOECC.

Currently, MOECC is proposing updating the chemical lists of the Ontario Drinking Water Quality Standards to remove additional legacy pesticides no longer in use and which have been delisted from the Canadian Drinking Water Quality Guidelines and have

not been detected in drinking water samples for at least ten years. The MOECC stakeholder consultation on the "Technical Discussion Paper on Proposed Ontario Drinking Water Quality Standards" has been underway since late 2014 but more recently, the Ministry is seeking input on more specific proposals to amend Ontario Regulations made under the Safe Drinking Water Act, including removal of legacy pesticides no longer in use.

Specifically, the MOECC is proposing that thirteen pesticides be removed from drinking water regulations including four of the pesticides (aldrin/dieldrin, chlordane, DDT and lindane) being proposed by Toronto Water for removal from the current subject pollutant list. MOECC has already removed mirex and hexachlorobenzene from drinking water monitoring requirements. Toronto Water's proposed approach with respect to these pesticides is consistent with the MOECC's approach. Given this recent development, Toronto Water only recently added hexachlorocyclohexane (known as lindane) to the list of pesticides being proposed for removal and as such materials provided during the consultation process did not include it.

Health Canada's Food Inspection Agency monitors and enforces maximum pesticide residue limits for both domestic and imported foods. In 2006/07, Health Canada reported that no pesticide residues were found in 90% of Canadian fruits and vegetables and in 89% of food imports tested. Maximum pesticide residue limits are set for all food commodities sold in Canada, whether imported or produced locally, at levels far below any amount that could present a health concern. Health Canada's Pest Management Regulatory Agency advised that maximum pesticide residue limits are established for aldrin/dieldrin, chlordane and DDT but not for mirex, hexachlorobenzene or hexachlorocyclohexane (known as lindane).

None of these chemicals are currently registered for use but because of their persistence in the environment the maximum pesticide residue limits have been maintained as a precaution. Toronto Water is proposing a more stringent approach, moving from a precautionary limit to a zero tolerance of no discharge. Large-scale food manufacturers being monitored by Toronto Water were contacted regarding their produce/food procurement practices and advised that they primarily purchase from local Canadian markets.

The one pesticide that will remain on the current subject pollutant list is pentachlorophenol. The only legal remaining use of this pesticide is as a wood preservation in utility poles. It has not been produced in Canada since the early 1980s. However, according to Environment Canada, in 2000, between 100 and 1,000 tonnes was imported into Canada for use as a wood preservative and 68 wood treating plants were identified as operational in Canada.

The Sewers By-law amendments required to implement this change are set out in Appendix A and further explanation of these amendments are set out in Appendix E.

Consultation Feedback

Consultation feedback varied on the proposed subject pollutant threshold reporting list with industry either fully or partially supporting it and with environmental groups opposed. Some environmental consultants provided the concept of a percentage based approach and this was further supported via the survey conducted in the spring of 2014. The Toronto Industry Network (TIN) initially supported the concept but wanted companies only to submit P2 Plans when they exceeded the sanitary sewers discharge limits. TIN's follow-up response received in spring 2015 supports the 25% threshold but asks if this could be raised to 50%. Numerous letters and emails of support were received from individual businesses, currently submitting P2 Plans for trace amounts of subject pollutants and a letter of support was received from the Canadian Association of Surface Finishing.

Nearly a dozen environmental groups were contacted and/or participated in the consultation process. Five letters consisting of nearly eighty recommendations, comments and questions were submitted by: the Canadian Environmental Law Association (CELA), Citizens for a Safe Environment/Committee for Safe Sewage, Lake Ontario Waterkeeper, Toronto Environmental Alliance (TEA) and Toronto Cancer Prevention Coalition opposing both proposals (threshold and pesticide removal). The general sentiment expressed was not to consider implementing a subject pollutant threshold reporting list as it was perceived to undermine the P2 Program goals and increase pollutants discharged from industry effluent into the wastewater treatment plants. Toronto Water responded to all recommendations, comments and questions received in the letters and throughout the consultation process, including the requests made for additional information on the subject pollutants.

For more details on the survey results, the feedback received by the above stakeholders and the responses provided by Toronto Water, refer to Appendix F.

Implementation Plan

Should the 25% threshold reporting limit and the removal of six (6) pesticides be approved, the proposed changes would be implemented starting January 1, 2016. The same stakeholders that were involved throughout the 2014-2015 P2 consultation will be provided written notices regarding the Sewers By-law amendments and P2 Program changes. The industry, commercial and institutional facilities currently participating in the P2 Program will be required to update their *next* scheduled P2 submission, according to the new threshold limits. Industry will no longer be required to include the subject pollutants that fall below the threshold limits in their P2 submissions but Toronto Water, which continually monitors industry effluent via a sampling schedule, will periodically check to confirm that the information in the P2 submission is correct. Should sampling results show a subject pollutant which had not been included exceeds a threshold, the industry will be required to re-submit their P2 submission.

Dental Office P2 Submission Requirements

The main Pollution Prevention requirements for dental offices are the installation and maintenance of a dental amalgam separator and the implementation of best handling practices of other biomedical wastes. Toronto Water has observed that the plans for dental offices generally do not change over the course of time and do not provide information or proof of amalgam separator cleanings. Therefore, the only way to ensure compliance with the maintenance of the amalgam separator is to have dental offices submit proof of maintenance of the dental amalgam separator used on site rather than the regular submission of a P2 Plan.

Under the proposed changes, dental offices will be required to submit a P2 Plan once and only submit an additional P2 Plan if there is a change in address, ownership, practice, number of patient chairs, amalgam separator brand and/or a change in the third party company that services the device (i.e. the management company that services the amalgam separator in a health building). Though the P2 Plan will be submitted once (if there are no changes in the dental practice listed above), proof of maintenance of the amalgam separator, via a copy of the invoice and/or service or maintenance contract, will be required to be sent every time the device is serviced. The document submission will be based on the manufacturer's recommended cleaning schedule or the dental office cleaning schedule, whichever is performed more frequently.

If cleaning is performed by the property manager (as in the case of some medical buildings), the dentist is responsible for providing the contact information of the property manager to Toronto Water for follow up. The Sewers By-law amendments required to implement this change is in Appendix A and the explanation of these amendments is in Appendix E.

In 2000, Toronto enacted the Sewers By-law with the requirement that dental offices have an amalgam separator. It is a device designed to remove amalgam waste particles from dental office wastewater so that these particles do not end up being suctioned into the dental unit vacuum line and discharged into the sewer system. Amalgam is an alloy of mercury with another metal used for dental fillings. Currently, dental offices have to complete a P2 submission every three years and those offices that may potentially discharge amalgam into the sewer system must install and properly maintain an amalgam separator. This proposed change, will focus on the maintenance of amalgam separators to reduce mercury levels in the sewer system. It will also simplify reporting and reduce redundancy of similar submissions on an ongoing basis. The current P2 Dental Office Form will be updated, with Legal Services approval, to coincide with the proposed change. A preliminary draft copy of the Form can be found in Appendix G for information purposes only.

Consultation Feedback

The Ontario Dental Association (ODA) and Royal College of Dental Surgeons of Ontario were consulted throughout the P2 consultation process and both support the proposed

change in dental office P2 submission requirements. Helpful recommendations made by both, such as adjusting the proof of amalgam separator maintenance from one year to one suggested by the amalgam separator manufacturer or practiced by the dental office, were incorporated. This suggestion was also voiced in the spring 2014 survey. For more details on the survey results and the feedback received by the above stakeholders, refer to Appendix H.

Implementation Plan

Should the dental office P2 submission requirements be approved, the proposed change would be implemented starting January 1, 2016. The Ontario Dental Association, the Royal College of Dental Surgeons of Ontario and all dental offices would be provided written notices regarding the Sewers By-law amendments and P2 Program changes. All dental offices will be required to submit a new P2 Plan by April 30, 2016 using a new form, when approved by Legal Services, which requires additional information to be supplied. Toronto Water will update the dental office database with the help of the Ontario Dental Association and the Royal College of Dental Surgeons of Ontario.

Environmental Code of Practice for Food Service Establishments with the Requirement to adhere to the CSA Standard B481 for Grease Interceptors

Grease blockage of sanitary sewer lines may cause sewage backup into basements, businesses, and potentially release grease to the natural environment. The resulting impacts on public health, cost of business impacts, clean-up and maintenance of sewer lines makes prevention of grease from entering the sewers of utmost importance. The Sewers By-law currently requires industrial, commercial or institutional premises where food is cooked, processed or prepared to install and maintain grease interceptors. The installation of grease interceptors is governed by the Ontario Building Code (OBC). The OBC also makes reference to the maintenance elements of the Canadian Standard Association's (CSA) B481 Series-12 Grease Interceptor. Toronto Water is proposing an Environmental Code of Practice consistent with the OBC.

Industrial operations where food is cooked, processed or prepared would be required to follow the proposed Food Service Establishment (FSE) Environmental Code of Practice, which will include the maintenance elements of the Canadian Standard Association's (CSA) B481 Series-12 Grease Interceptor, as well as, best kitchen practices (e.g. operation procedures and disposal practices) to minimize grease from entering the sanitary sewer system (with indoor related tips) and the storm sewer system (with outdoor related tips).

Grease is commonly generated when cooking, heating processing and/or preparing food and can be found in meats, fats, lards, cooking oil, shortening, butter and margarine, food scraps, baking goods, sauces, salad dressings, gravies and dairy products. Grease is also present on utensils, equipment, appliances and containers used for cooking, heating,

processing and/or preparing food. Accordingly, a facility that does not cook food on site but prepares or assembles food or beverage may also generate grease when cleaning utensils, equipment, appliances and containers and, therefore, requires a grease interceptor (for example: coffee shops that serve coffee will have dairy products).

A grease interceptor is a device designed and installed to separate and retain oil and grease from wastewater, while permitting the wastewater to discharge to the sanitary sewer. When the wastewater enters the device, the solids sink to the bottom and the grease floats to the top allowing only the wastewater to then flow into the sewer system. The two most common forms of a grease interceptor, used by smaller operations, can be installed under the sink (and looks like a box with an entrance pipe and exit pipe) or in-ground in the kitchen area where an access cover is removed to access the grease interceptor. Large-scale operations may choose to install a large grease interceptor in the basement, with the appropriate piping delivering and removing the wastewater, or in-ground outside – referred to as a gravity grease interceptor. These larger grease interceptors provide longer retention times (about 30 minutes instead of a few minutes) to separate the grease from the wastewater.

Installations of new or upgraded grease interceptor must be in compliance with the most recent requirements of the Ontario Building Code (OCB) at the time of installation. Currently the installation requirements are detailed but the maintenance requirements are left to the owner/operator of the facility. This has not proven to be an effective approach due to the number of grease blockages Toronto Water's Environmental Monitoring and Protection (EM&P) responds to. In 2014, EM&P was called out to 29 grease related calls with 20 of those calls dealing with grease blockages and 9 dealing with grease being poured directly into the sewers/waterways. This only includes calls where the source was known and EM&P was called upon for enforcement purposes. The FSE Environmental Code of Practice provides the level of maintenance detail needed to help minimize the grease issues Toronto Water is currently faced with.

When a grease interceptor is not installed, is too small for the size of the operation, is not maintained properly (with frequent clean-outs) and/or is not replaced when needed, the fat, oil, grease and solids will flow into the sewer system pipes and over time, harden and build up constricting the flow in the pipes and leading to blocked pipes. Since 2008, EM&P and Toronto Public Health (TPH) work collaboratively to address this issue by having TPH inspectors flag issues with grease interceptors at facilities during their routine "DineSafe" inspections and send referrals to EM&P bylaw officers who then follow up with inspections and enforcement. From 2009 to 2013 EM&P received 1,735 referrals from TPH for facilities that had no grease interceptors installed and 3,118 referrals for facilities that had improperly maintained grease interceptors. This resulted in EM&P inspecting and sending out over 2,000 notices of violation. EM&P bylaw officers reported that facilities ranging from small to major well known franchises were cutting back on maintenance which has contributed to grease in the sewers.

This grease issue is also being experienced by other municipalities and to help combat it, the CSA Standard B481 has been adopted by the Canadian Council of Ministers of the

Environment's (CCME) Model Sewer Use By-law for Canadian municipalities to use as a guide. Table 2 below depicts some of the municipalities that have adopted, in some form or other, the CSA Standard B481 Series-12 Grease Interceptor into their sewers by-laws. Other municipalities have chosen to directly adopt the Standard into their by-laws. Toronto Water has chosen to include information from the CSA Standard B481 in the FSE Environmental Code of Practice. This allows other grease generating practices to be captured, via good kitchen practices, and not just grease interceptor requirements, which is the focus of the Standard. This also allows Toronto Water to address unique situations (e.g. mobile food vendors) differently by creating specific sections in the FSE Environmental Code of Practice for them.

Table 2: Other Municipalities Adopting CSA Standard B481 Series-12 Grease Interceptor

Municipality	Year Adopted	Action Taken
Brantford	2014	Adopted CSA B481 – by-law approved April 22.
Cobourg	pending	Adopted CSA B481 - currently CCME wording with proposal to incorporate CSA wording.
Durham	2013	Adopted CSA B481 – used wording from CCME.
Hamilton	2014	Adopted CSA B481 in the by-law
Markham	2014	Adopted CSA B481 – used the wording in the CCME model by-law.
York Region	2011	Adopted CSA B481 in the by-law.

Table 3 below includes highlights of the FSE Environmental Code of Practice with details found in Appendix B. The initial Council approved recommendation referred to the creation of a Best Management Practice (BMP). The title "Environmental Code of Practice" is being used to better emphasize to the food service sector the impact of grease discharges to the environment.

Table 3: Highlights of the Food Service Establishment ("FSE") Environmental Code of Practice

Grease Interceptor Installation	Grease Interceptor Maintenance	Good Kitchen Practices
-installations require a Toronto Building permit -new installations triggered by a significant change in operation (e.g. expansion, remodeling), new businesses, new	-service grease interceptor before the volume of grease and solids exceeds 25% of the liquid volume of the grease interceptor -service required every 4 weeks, unless volume of grease and solids does not exceed 25% of the liquid volume in the interceptor (within the 4 week period), then must service when 25% volume is reached and no	Indoor: -post a sign that read "Absolutely NO Fat, Oil or Grease Down the Sink" -use rubber scrapers and/or paper towels to remove solids and grease from pots, pans and wares and place into

Grease Interceptor Installation	Grease Interceptor Maintenance	Good Kitchen Practices
buildings and any existing grease interceptors causing negative effects on a sewer line, by interfering with water flow or drainage, require a Toronto Building permit (incorporating the most recent Ontario Building Code requirements) but must also be accessible for maintenance and inspection	later than 8 weeks (proof required if not reached at 4 weeks) -manual clean-out of interceptor permitted for FSEs without onsite stove or fryer and other requirements, otherwise a MOECC certified waste hauler must be contracted -recommend waste hauler invoice contains information on the interceptor's integrity and the grease, solids and water composition -a service log shall be kept to demonstrate grease management compliance -do not add any additives into grease interceptor -applicable to new and existing food service establishments	green bins before washing pot, pans and wares -use absorption material to soak up grease spills and grease material under fryer baskets -install and maintain screens over all sinks/floor drains and dispose of solids in green bin Outdoor: -do not pour anything down the outdoor catch basins (this includes mop water) -protect grease bins from spills by anchoring them to the wall or installing a barrier

The Sewers By-law amendments required to implement this change is in Appendix A and the explanation of these amendments is in Appendix E.

Consultation Feedback

The lack of education and awareness regarding grease issues arose throughout the consultation. In response, Toronto Water has substantially revised its existing grease interceptor educational communication and created a new educational communication specific to mobile food vendors (as it was realized they need to be treated differently due to their mobile nature). For details on the concerns brought up by stakeholders and the modifications made and communication pieces created by Toronto Water, refer to Appendix I.

The Ontario Restaurant Hotel and Motel Association (ORHMA) did not agree with the City's approach and recommended that only a voluntary FSE Environmental Code of Practice be used with exemptions (grandfathering) for existing industrial, commercial or institutional premises where food is cooked, processed or prepared. The Toronto Association of Business Improvement Areas (TABIA) is generally in support with minor

concerns and the Building Owners and Managers Association (BOMA) is open to help communicate the FSE Environmental Code of Practice once it is implemented. Meetings also took place with Exhibition Place and Canadian National Exhibition to discuss the implications of the FSE Environmental Code of Practice on mobile food vendors and the proper disposal of wastewater at festivals where such vendors are found. Toronto Public Health also participated and reviewed the materials created.

For more details on the survey results, the feedback received by the above stakeholders and the responses provided by Toronto Water, refer to Appendix I.

Toronto Water looked at the licensing procedures, at the request of ORHMA, to identify if grease interceptor requirements are part of the approval process. Currently, the licensing process does not include this requirement but MLS is open to creating a 'clearance' specific to grease interceptors that must be met before a license would be issued. Toronto Water is working with ORHMA to identify what documentation would be appropriate to act as proof that a grease interceptor has been installed and will continue to work with MLS to implement the 'clearance' that will provide a front end resolution to the grease issue.

Implementation Plan

Should the proposed FSE Environmental Code of Practice regarding grease interceptor be approved, the proposed change would be implemented starting January 1, 2016. The same stakeholders that were involved throughout the 2014-2015 P2 consultation will be provided written notices regarding the Sewers By-law amendments, along with copies of the FSE Environmental Code of Practice. Additionally, the grease interceptor educational communication and the mobile food vendor educational communication will be modified to include wording on the FSE Environmental Code of Practice and both will be sent out with the written notices to the respective audiences. Toronto Water will work with TABIA and BOMA to provide training sessions to their members on the FSE Environmental Code of Practice requirements.

Best Management Practices (BMP) for Automotive Refinishing Sector (Autobody Shops)

Currently, the Sewers By-law allows for a BMP for vehicle wash operations, automotive repair facilities and gas stations but none for autobody shops. An autobody shop's main line of work is to fix or replace body parts and to paint vehicles. They also wash vehicles and perform many general automotive repairs. As the work method is similar across the sector, this sector can benefit from a BMP.

Autobody shops will be required to follow the Best Management Practice (BMP) and submit a one-time declaration form confirming compliance. Currently, autobody shops are required to submit a P2 Plan every 6 years, with an update in the 3rd year, to Toronto Water. This sector has similar business structure with the difference being size and

location and has no control over the paints, as paint manufacturers that supply the paints are already regulated by the Federal government, but can instead ensure proper housekeeping in their daily operations to reduce the amount of paints used and discharged. Given all this, there is limited scope to have a site specific P2 Plan. Accordingly, the proposed BMP will simplify reporting and reduce redundancy of similar submissions on an ongoing basis.

Automotive repair operations and autobody repair operations have overlapping practices (i.e. performing parts cleaning and degreasing and handling oil and oil filters). Accordingly, all current automotive related BMPs were amalgamated and new sections addressing autobody repair painting operations were added to create a new "Automotive Service Facility BMP".

The Collision Industry Information Assistance (CIIA) training materials (with the permission of the CIIA) was used as a source in creating these new sections, as well as, ChemTRAC's "Resource for Greening Autbody, Collision Repair and Auto Refinishing Pollution Prevention Information" and other automotive environmental checklists. Given the current automotive related BMPs were created in 2005, Toronto Water took the opportunity to update the amalgamated Automotive Service Facility BMP with information obtained from the above sources. The Canadian Fuels Association (CFA), formerly known as the Canadian Petroleum Products Institute, reviewed the initial BMPs and was again asked to review the updated information. Additionally, the City's Fleet Services was asked to review the updated information and agreed with the modifications. Minor changes were also made to the Automotive Service Facility BMP for better consistency with the Ontario Building Code (OBC).

Table 4 below includes highlights of the Automotive Service Facility BMP, with a focus on autobody repair operations - details can be found in Appendix C.

Table 4: Highlights of the Automotive Service Facility Best Management Practice

Paint and Equipment	Spray Gun and Booth	Storage and Disposal
-use high solids/low VOC and/or water based paints -minimize or eliminate the use of hazardous paint-removing solvents -keep paint containers tightly closed when not in use -schedule bath processing of lighter	-use efficient spray equipment such as high volume and low pressure spray gun, airless spray gun and/or air-assisted spray gun -avoid open shop spraying -clean spray gun using enclosed spray gun cleaners or VOC recycling equipment -clean spray gun between coating applications (using	-purchase and use only what is needed to reduce outdated materials and minimize product in stock -consider purchasing re-usable spill sorbents (e.g. absorbent pads) that can be laundered by an industrial laundry -ensure all materials are stored in proper containers with correct labels (e.g.

Paint and Equipment	Spray Gun and Booth	Storage and Disposal
shades to avoid cleaning between batches -use extra mixed paint as undercoat for other jobs or give it to customers as touch-up paint -dry paint containers completely to avoid residual paint that can still be used -reuse paint mixing cups and use metal mixing sticks and clean both before paint dries using a cloth/towel and not by washing with water (use small portion of thinner)	solvents) -use spray booths and keep booths and equipment clean and in proper maintenance -conduct regular inspections and maintenance of air supply, exhaust performance and booth filters, adjusting and replacing when necessary -plan cleaning schedules to minimize cleaning cycles -suggest coating spray booth walls with strippable compounds that can be removed by hot high pressure water and scarp flat surfaces (collect water and store it in a drum for proper disposal or absorb it using cloth/towel)	MSDS) -store hazardous waste (e.g. solvents, paints, oils etc…) in double-bottomed drums -store materials and waste indoors or under cover to prevent moisture seeping in -dispose of hazardous waste using a MOECC certified waste hauler and NEVER pour it down a drain or outdoor catch basin -if washing a vehicle outside, do not let wastewater flow into outdoor catch basin

The Sewers By-law amendments required to implement this change is in Appendix A and the explanation of these amendments is in Appendix E.

Consultation Feedback

The Collision Industry Information Assistance was consulted throughout the P2 consultation process, worked with Toronto Water in developing the new autobody repair operation sections of the BMP and supports the proposed BMP for the automotive refinishing sector (autobody shops). For more details on the survey results and stakeholder feedback, refer to Appendix J.

Implementation Plan

Should the Automotive Service Facility BMP be approved, the proposed change would be implemented starting January 1, 2016. The CIIA, CFA and all autobody shops will be provided written notices regarding the Sewers By-law amendments and P2 Program changes, as well as copies of the new BMP. The current P2 Autobody Shop form will no longer apply and a new one-time declaration form, will be finalized in consultation with Legal Services, confirming compliance with the new BMP. An example of this

preliminary draft form can be viewed in Appendix K. All autobody shops will be required to review the BMP and submit the declaration form. Toronto Water will take this opportunity to update the autobody shop database with the help of the CIIA.

Environmental Code of Practice for Mobile Washing Business Operations

Mobile washers typically wash vehicles, equipment and other items outdoors at the customer's site. While it is not a subject sector under the P2 Program, this sector has been under review by Toronto Water due to illegal hook-ups to fire hydrants and wash water discharge to the storm sewers. If pollutants from the cleaning products and those generated from washing vehicles, equipment and other items are allowed to flow into a storm sewer untreated, the pollutants will flow directly into the natural environment (streams, rivers and Lake Ontario). Such contaminants include heavy metals, oil, grease, volatile organic compounds, total suspended solids and nonylphenols (commonly found in soaps) and, among other impacts, can also alter the pH and biochemical oxygen demand of the water source.

Mobile washing business operations include businesses with mobile trucks that wash vehicles/equipment outdoors, remove graffiti and restore buildings/pavement using water. This also includes any businesses with onsite (i.e. via a hose) and offsite (i.e. via a truck) mobile washing operations and those businesses that hire mobile washing business operations. There are no specific requirements for mobile washing business operations, including no P2 requirements, other than to comply with the Sewers By-law. This includes not discharging wastewater into the storm or sanitary sewer that exceeds the storm sewer discharge limits or sanitary sewer discharge limits, respectively.

Consultation Feedback

The consensus from this sector is that the City's efforts to regulate it would require significant changes to current business practices and more time to discuss the impact and develop workable options is required. As a result, a Mobile Wash Working Group was created to work through, in detail, each wash job performed by this sector and the feasibility of wastewater disposal options. The working group has met on three occasions and has provided a variety of other wastewater disposal options that need to be investigated and stakeholders also identified the following issues that need to be addressed by Toronto Water before proceeding further:

- the lack of water fill stations in the City of Toronto;
- current washing practices performed by City Divisions and by contractors hired by the City; and
- financial assistance.

Currently, mobile washing business operations acquire their wash water from water fill stations outside the City of Toronto or illegally from fire hydrants in the City of Toronto. Preliminary research reveals that Toronto is the only municipality in the GTA that does

not have water fill stations. Other municipalities have simple water fill stations, located near a variety of water sources (i.e. water towers, hydrants and underground water pipes), that operate on a pre-paid smart card system. Toronto Water is looking into the feasibility of building water fill stations across the City and will outreach to other municipalities regarding the implementation and operation of their water fill stations to develop a business case.

EM&P has started discussions with City Divisions on their current washing practices and the washing practice of the contractors they hire but more time is required to consult with the numerous Divisions (i.e. Fire Services and other emergency services, Transportation Services, Solid Waste, Fleet Services and others) including several units within such Divisions. In general, substantial consultation is still required to thoroughly review all wastewater disposal options available and to address the issues identified by the Mobile Wash Working Group before an Environmental Code of Practice can be created. Toronto Water is recommending that stakeholder consultations continue throughout 2016 regarding this proposed change with a report back in early to mid-2017.

By-Law Amendments

Several Sewers By-law amendments are proposed to address the changes to the P2 Program noted in this report. Toronto Water has also identified a number of recommended amendments to clarify or enhance terminology, administration and enforcement provisions of the Sewers By-law. Amendments are also proposed to Chapter 851, Water Supply (the "Water Supply By-law"), primarily in respect to the usage of fire hydrants.

Appendix A sets out the proposed amendments to the Sewers By-law and Water Supply By-law. Appendix E provides an explanation and the rationale for each proposed amendment.

CONTACT

Joanne Di Caro, Manager
Environmental Monitoring & Protection
Toronto Water
Phone: 416-392-2929
Email: jdicaro@toronto.ca

Lawson Oates, Director
Business Operations Management
Toronto Water
Phone: 416-392-8223
Email: loates@toronto.ca

SIGNATURE

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Lou Di Gironimo
General Manager, Toronto Water

ATTACHMENTS

Appendix A: Draft Amendments to Municipal Code Chapter 681 – Sewers and Municipal Code Chapter 851–Water Supply
Appendix B: Food Service Establishment Environmental Code of Practice
Appendix C: Best Management Practices for Automotive Service Facilities in the City of Toronto
Appendix D: Pollution Prevention (P2) Program Stakeholder Consultation Process
Appendix E: Explanation of Draft Amendments to Municipal Code Chapter 681 - Sewers
Appendix F: Consultation Feedback Details for Proposed Subject Pollutant Threshold Reporting List
Appendix G: Draft Pollution Prevention Dental Office Form
Appendix H: Consultation Feedback Details for Proposed Dental Office Pollution Prevention (P2) Submission Requirements
Appendix I: Consultation Feedback Details for Proposed Food Service Establishment Environmental Code of Practice
Appendix J: Consultation Feedback Details for Proposed Automotive Service Facility Best Management Practice
Appendix K: Draft Automotive Service Facility Declaration Form