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IMPROVING YORK REGION'S SEWER USE COMPLIANCE PROGRAM TO PROTECT SHARED INFRASTRUCTURE

The Environmental Services Committee recommends the adoption of the recommendations contained in the following report dated October 4, 2011, from the Commissioner of Environmental Services.

1. RECOMMENDATIONS

It is recommended that:

1. Council support the implementation of the Sewer Use Compliance Program Strategy as outlined in this report, including the addition of a Senior Sewer Use Bylaw Enforcement Officer and capital and operating expenditures outlined in Table 5 and subject to the 2012 budget approval process.

2. Schedule "A" to the fees and charges bylaw (Bylaw 2010-15) be amended to implement the proposed fees described in Table 4 of this report.

3. The Regional Clerk circulate this report to the clerks of the local municipalities.

2. PURPOSE

This report provides Council with an outline of the enhancements to York Region's Sewer Use Compliance Team's Program Strategy to ensure compatibility with Durham and Peel's sewer use bylaws given that over 85 per cent of York Region's wastewater is treated by facilities in these Regions. The proposed enhancements will also achieve a best-in-class sewer use program.

3. BACKGROUND

Regulating and monitoring discharges to the sanitary and storm systems protects public, staff, assets, infrastructure and the environment

The Region and local municipalities face risks associated with the discharge of industrial wastewater into the Region's sanitary collection systems. These risks can contribute to critical infrastructure failures, premature degradation of equipment, and/or negative operating impacts ranging from higher operation and maintenance costs to the complete failure of biological processes at water pollution control plants. Staff help mitigate these risks by sampling 135 medium to high risk industrial dischargers on a regular basis to

ensure compliance with the Region's existing Sewer Use Bylaw (Bylaw). Typical industries subject to regular monitoring include metal finishers, food processors, soap and cleaning compound manufacturers, and chemical manufacturers, among others. The current key program components performed by staff are shown in Table 1.

Table 1
Sewer Use Key Program Components

Key Program Components	Description
Policy	Updating program related policies including the Sewer Use Bylaw and Hauled Wastewater program policy
Monitoring	Obtaining and analysing samples from 135 industrial dischargers
Enforcement	Ensuring compliance of non-compliant dischargers through an escalation protocol (violation notices, compliance programs, prosecutions, etc.)
Administration	Processing environmental information and dewatering requests and preparing surcharge billing information
Stakeholder Engagement	Informing and obtaining feedback from relevant stakeholders including local municipalities, neighbouring regions, industry, and other regional departments
Program Enhancements	Strategy development to administer an effective sewer use program

Opportunities for cost recoveries are realized through provisions in the Sewer Use Bylaw that allow the Region to enter into surcharge agreements with industries. Surcharge agreements permit industries to exceed typical Bylaw parameters for biochemical oxygen demand (BOD_5), total kjeldahl nitrogen, total suspended solids, phenolic compounds (4AAP), total phosphorus, animal and vegetable oil and grease on a fee basis. York Region's surcharge rates have not been updated since 1998.

Using the Scott's Directory (2010), 4,246 firms within the Region have been identified as medium to high risk for potential discharge violations. The current Regional sewer use program has information on 923 industries of which 135 are actively monitored. Therefore, the sewer use program needs to be significantly expanded to fully understand

and address the identity, quality, and quantity of industrial discharges to the sanitary system. Given current limited program resources, the Region is unable to efficiently identify or prevent (in some cases) the causes of occurrences affecting infrastructure or wastewater operations. Furthermore, opportunity exists to ensure appropriate full cost recovery by updating surcharge rates and hauled wastewater rates to align with actual costs of operating these programs. Wastewater discharged from York Region to facilities in the Regions of Durham and Peel must comply with their sewer use programs. As an example, strict controls are required on mercury concentrations discharged to the sanitary system since these concentrations could have an immediate impact on compliance with air emissions criteria for the Duffin Creek Plant. Capital and operating costs associated with emissions controls of this nature far exceed the costs associated with efforts to prevent contaminants from entering the sanitary system. These proactive efforts are best driven through the Sewer Use Bylaw Program. Given the Region's wastewater is treated at facilities in Durham and Peel, it is imperative that the Region's Sewer Use program be completely aligned with the programs in these Regions which requires full implementation of the proposed program enhancements. Going forward, elements of the Sewer Use program will be regularly reviewed to ensure ongoing alignment with our partner municipalities.

York Region has been working with local municipalities to address issues and concerns regarding industrial sewer use. Local municipal collection infrastructure is also at risk due to its proximity to industrial discharges. Currently, the Region conducts the majority of sampling and monitoring of discharges from industrial sites that enter local sewage collection infrastructure. Thus, there is a strong mutual interest in providing an effective sewer use monitoring and enforcement program.

Growth in population and the arrival of new industrial, commercial, and institutional facilities throughout the Region have resulted in an increase in flows and discharges to municipal and Regional sewers. Furthermore, increasing regulatory pressure stemming from regulatory initiatives, such as the Lake Simcoe Protection Plan, Canadian Council of Ministers of the Environment (CCME), Municipal Wastewater Effluent Strategy, and the Provincial Toxics Reduction Strategy, has resulted in additional compliance requirements that need to be met in wastewater treatment operations. An updated Program Strategy for the Sewer Use Compliance Team will better prepare the Region for future regulatory compliance, ensure full cost recovery and strengthen York Region's Sustainability Strategy, "Towards a Sustainable Region." It will also enable the Region to continue a leadership role in promoting stewardship and responsible sewer use.

4. ANALYSIS AND OPTIONS

Program review has identified opportunities to address gaps in existing Sewer Use Compliance Program

In 2010, the Region retained CH2M HILL Canada Limited to help define the future required Sewer Use Compliance program by working with staff to understand the Region's current service level of sewer use monitoring and enforcement and develop a roadmap toward industry-leading practices.

Based on this gap analysis, workshop attendees from various business units within Environmental Services identified target improvements in approximately 30 business and process areas throughout the program for short-term (2010 - 2011), mid-term (2012 to 2014), and long-term (2015 and beyond) implementation (see *Attachment 1*).

This roadmap outlines required program improvements in development of enhanced business and financial processes, along with timing for additional staff and equipment necessary to successfully deliver this strategy. These improvements are required to ensure that:

- Assets are protected from premature failure (at a direct cost to rate payers)
- Appropriate roles and responsibilities can be implemented with new and existing staff, and required skills needed for ongoing support of the team's activities are available
- Staff have appropriate equipment to facilitate an effective monitoring program, including after hours and emergency monitoring
- Additional program development and continuous improvement initiatives are implemented to secure ongoing program success

Consultation with Greater Toronto Area municipalities resulted in a best practices matrix outlining several key program improvements

Over the past several months, the Sewer Use Compliance team has met with the Regions of Peel, Durham, Waterloo and Niagara, and the City of Toronto to share program information and discuss strengths, challenges and sewer use bylaw updates. Some common best practices among neighbouring municipalities include:

- Continuous monitoring and sampling
- Industry identification
- Leveraging technology for better data management and analysis to drive action and follow up
- Regular review of program rates to ensure appropriate cost recovery; and
- Education and awareness

In addition to program specifics, a review of similar municipalities within the Greater Toronto Area and across Canada identified a significant gap in resource commitments for

the Region's Sewer Use Compliance program. The U.S. Environmental Protection Agency Federal Guidelines suggest that staff levels for an Industrial Waste Control Program should be between 0.5 to two staff per 10 USMGD (38 MLD).

Under this guideline, it is estimated that a minimum of seven to eight staff would be recommended for the Region's program compared to the existing five employees. Table 2 illustrates the staffing levels for comparable municipalities as well as the City of Winnipeg, chosen due to its similar size and structure to York Region. The Regions of Waterloo and Niagara were chosen as they operate in a two-tier service delivery model similar to York Region. York Region's current staffing levels in sewer use are lower than those of peer municipalities and significantly below industry recommendations.

Table 2
Benchmark comparison of York Region existing staff for Sewer Use Compliance Program

Municipality	Approximate Total Wastewater Treatment Capacity (MLD[3])	Current Staff	Ratio of Staff[1] per 10 USMGD[2] (38 MLD)
York Region	562	5 [4]	0.34
Durham Region	404	4	0.37
City of Toronto	1,232	36	1.11
Peel Region	661.5	14	0.80
Niagara Region	330	4	0.46
City of Winnipeg	305	8	1.00
Region of Waterloo	297	7	0.89

1. USEPA Recommended Ratio 0.5 - 2
2. US million gallons per day
3. Million litres per day
4. York Region staff only- No full time staff at local municipal level

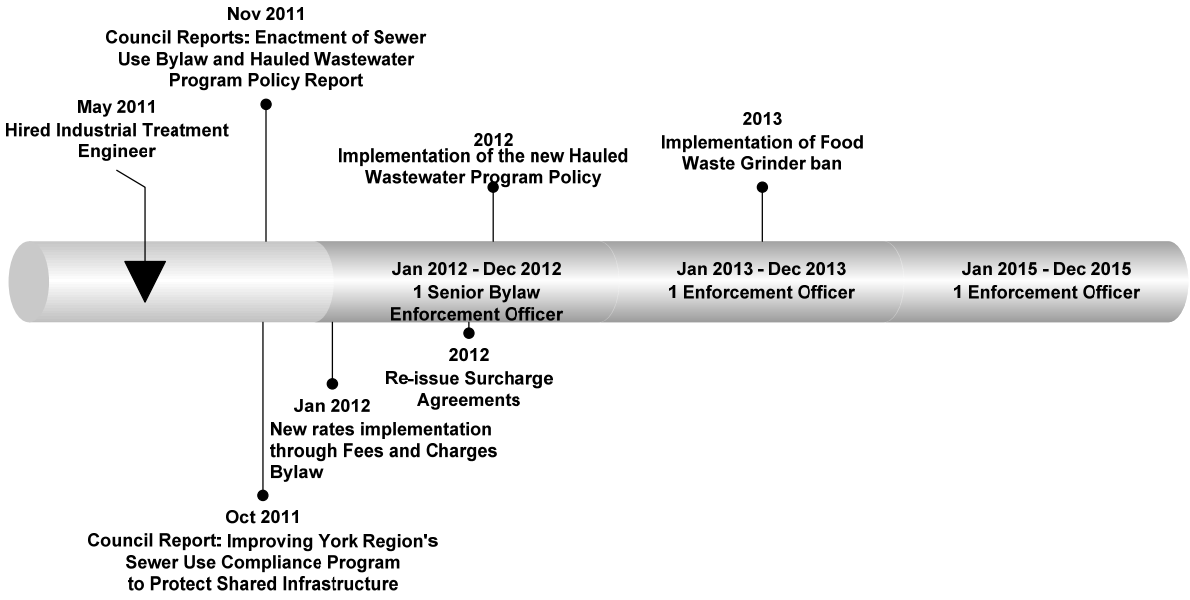
The Town of Markham's program involves sampling and monitoring discharges from industrial, commercial, and institutional sites of concern within the Town. Markham's program also includes sewer damage assessment (CCTV and third party engineering inspection) along with legal proceedings for cost recovery of repairing damaged infrastructure. However, there are no full-time resources assigned to the sewer use program from any local municipality within York Region.

As a preliminary recommendation, a staffing plan has been developed to increase the staffing complement of the Region's Sewer Use Enforcement Team from a total of five staff to eight, between 2012 and 2015. This plan will increase the staffing complement in correlation to the increased workload from additional sampling due to forecasted growth of 10% in the number of active surcharge agreements, and monitoring of 691 medium to high risk dischargers by 2015. Other methods will be introduced to the monitoring program, such as the use of automatic samplers and requirements for dischargers to self-

monitor and report to meet additional growth in sampling and monitoring needs. The proposed plan will allow for the future assessment of staffing resourcing needs prior to the recommendation of any additional staff beyond 2015. As roles and responsibilities are formalized between the Region and local municipalities, any future staffing commitments from local municipalities will also complement the Region's staffing plan. This is anticipated to bring the shared program's staffing resources closer to the Environmental Protection Agency recommendations

Certain additions to the Region's staff and capital investments for the Environmental Compliance program were approved in the 2011 budget. An Industrial Engineer position approved and recruited in 2011 has contributed to the enhancement of the sewer use program by completing reviews of dewatering discharge applications, environmental site assessment information requests, engineering reports on pre-treatment and compliance, and industry inspections. With the introduction of the Industrial Engineer to the team, the program has benefited through increased technical oversight and review of numerous external submissions and requests received related to the Sewer Use program. Figure 1 summarizes the future Environmental Compliance staffing resource needs. A phased staffing plan has been developed to achieve the recommended staffing complement by 2015.

Figure 1
Timeline for Implementation of Sewer Use Program Strategy



Program enhancements will be implemented over the next four years to develop a "best-in-class" sewer use program

York Region is working towards a best-in-class Environmental Compliance Program over a 5-year period summarized in ten key steps:

1. Develop a program strategy and establish short and long term goals to remain focused on administering and implementing the program.
2. Develop a risk-based decision model for sampling/monitoring program and prioritization planning to ensure adequate protection of linear infrastructure and operations.
3. Implement an updated Sewer Use Bylaw and provide enforcement
4. Identify and plan for capital and operating investments of critical resources including staffing, vehicles, equipment, and software for data management.
5. Establish and document procedures, business processes and policies of the program and determine additional program development and continuous improvement initiatives to secure ongoing program success.
6. Reach out to stakeholders together with local municipalities to improve program efficiencies, enhance communication and mitigate risk.
7. Continuously monitor the Region's critical infrastructure and develop rate models that ensure appropriate recovery of funds for surcharge and hauled wastewater programs.
8. Establish education and awareness programs for industry, commercial, and institutional facilities as well as residents with specific focus on areas that are new to York Region's program and of high risk to the Region's infrastructure and operations.
9. Develop codes of practice or best management plans to address issues related to trades or businesses that require a monitoring program to prevent premature infrastructure deterioration or upset in sewage treatment processes.
10. Periodically reassess and revise program strategy to reflect current practices and ensure continuous improvement.

Updating the Sewer Use Bylaw will help to implement proactive management of Regional and local sanitary infrastructure

The existing Sewer Use Bylaw is in the process of an update that will build on the structure of the existing bylaw and is expected to be brought forward in a report to Council in November 2011. This update will add new enforcement provisions as well as other administrative revisions to existing provisions. Local municipalities were consulted during the process to update the Bylaw. The purpose of the update is to improve the administration, clarity, enforcement and the ability to protect health and safety of the public, staff, infrastructure and the environment. Some of the proposed revisions include:

- More clarity in prohibited discharges to sewage works
- New requirements ensuring onsite retention of maintenance records for interceptors and dental amalgam separators

- Comprehensive administration and enhancement of enforcement powers including fine schedules, ability to issue orders, and provisions for continuing offences
- Formalized approval process for construction dewatering
- Enhanced enforcement powers for enforcement officers
- Prohibition on installation of new and replacement of existing food waste grinders

Prohibition of food waste grinders will mitigate harmful impacts on infrastructure and lower operational costs (1 Year Phase-in period)

Food waste matter from food waste grinders negatively affects York Region's wastewater system by increasing operational, capital and maintenance costs and overloading treatment plants, with organic matter, which can result in a decline of treatment efficiency and capacity. These impacts are also experienced by the Region's servicing partners in Durham and Peel Regions. The York Durham Sewage System Management Committee has stated in an earlier correspondence they are not in favour of permitting the use of food waste grinders due to increased organic loadings and associated serious odour concerns and increased costs. The decision was made in response to a request by a private firm interested in proposing a food waste grinder pilot study in the City of Vaughan. Local municipal staff also support and endorse a ban on the installation and replacement of food waste grinders. Processing organic waste generated by food waste grinders at wastewater treatment facilities is much more costly when compared to composting or use of the green bin program (Table 3). Other larger municipalities, including Ottawa and Kingston also prohibit food waste grinders.

Table 3
Regional Facility Operating Cost Comparison
for Organic Waste Disposal

Disposal Method	Regional Facility Operating Cost (per tonne)
Food waste grinder effluent at sewage treatment plant[1]	$408
Green bin waste[2]	$178
Compost in backyard[3]	$25 [4]

1. Estimate based on 2011 costs at Duffin Creek Water Pollution Control Plant
2. Estimate based on 2011 York Region processing costs
3. Resident(s) bears the initial cost ($30-$100) of backyard compost bin
4. York Region sells subsidized compost bins at a cost of $10 if purchased during one of the Region's promotional events.

The Sewer Use Compliance team has prepared a Fact Sheet on food waste grinders to educate the development community, industries and residents (see *Attachment 2*). Fact Sheets are posted on York Region's website and were distributed to industries during an information session held on September 12, 2011.

The updated Sewer Use Bylaw will ban the installation and replacement of food waste grinders using a one year phase-in approach (i.e., the ban will take effect one year after the Bylaw is enacted). During this one year period, York Region will develop and implement a communication strategy engaging stakeholders such as manufacturers of food waste grinders, retailers, industries and residents to discuss the negative impacts of food waste grinders and highlight appropriate alternatives. Consultation with the Building Industry and Land Development Association (BILD) was conducted on September 29, 2011 to provide advanced notice of the proposed prohibition of food waste grinders within new developments. This information and approach was well received and supported by the attendees. A letter, stating the Region's position on food waste grinders was also sent to BILD in early October 2011.

Proposed Hauled Wastewater Program Policy will mitigate risks of unknown substances entering sewage works and ensure full cost recovery

Creation of a formalized Hauled Wastewater Program Policy is necessary for successful implementation of the enhanced sewer use strategy. This formalized policy establishes the requirements and regulates the activities under the Hauled Wastewater Program. Details of this updated policy will be available in the Hauled Wastewater Program Policy Report which is expected to be brought forward in a report to Council in November 2011. Highlights of the policy include:

- New disposal requirements and procedures
- New hours for disposal
- New sampling requirements and procedures
- New fee schedule for annual registration, replacement of system access cards, regular disposal hours of operation, and emergency after-hours disposal procedures and locations
- New sanctions for hauled waste policy violations

Enhancements help align execution of Sewer Use Compliance team responsibilities with corporate sustainability initiatives

The Environmental Services Department established strategic goals that demonstrate a commitment to service delivery and recognize factors currently driving and impacting business. The Sewer Use Compliance team objectives align with these goals, which are to protect:

- Residents, municipal workers and property from hazardous conditions
- Regional sewers from corrosion, obstruction and other damage
- Wastewater treatment processes from upset or breakdown
- The environment from contaminants that our sewage systems cannot remove
- The quality of wastewater biosolids

5. FINANCIAL IMPLICATIONS

Industry stakeholders have been notified of a 14-month phase in approach for updated surcharge and hauled waste rates

The surcharge rate has not been changed since 1998 and many services currently being provided by the Sewer Use Compliance team do not have appropriate fees to support the size and scope of the program. A surcharge rate study was conducted earlier this year to determine the appropriate rates for full cost recovery. Rates from neighbouring municipalities were considered to validate the rate increase and compared the Region to its peers. Table 4 compares existing and proposed rates for service/activity of the Sewer Use Compliance Program. It is proposed that surcharge rates will be increased over the next 14 months, starting January 2012, to move towards full recovery of wastewater treatment and administrative costs. Moving forward, surcharge and hauled waste rate increases will be annually reviewed as part of the annual budget process. Proposed increases in hauled waste rates will be presented in a November report to Environmental Services Committee.

Proposed rate increases were communicated to industry stakeholders at an information session and feedback was obtained to address concerns. Fact sheets were also prepared to inform stakeholders of rate increases and program updates and posted on the Region's website.

Actual surcharge agreement revenues for 2010 were $270,000 and revenues for hauled waste fees were $425,000. Surcharge agreements and hauled waste revenues projected for 2011 are approximately $311,000 and $540,000 respectively.

Table 4
Proposed Increases in Program Rates to 2013

Service / Activity	Current Fee 2011	Proposed Fee 2012	2013
Surcharge Agreement			
New surcharge agreement fee	n/a	$300	$300
Annual Surcharge agreement maintenance fee	$300	$600	$600
Surcharge rates (per kg)[1]			
Biochemical Oxygen Demand (BOD_5)	$0.33	$0.42	$0.53
Phenolic Compounds (4AAP)	$0.33	$0.42	$0.53
Suspended Solids (SS)	$0.33	$0.42	$0.53
Total Kjeldahl Nitrogen (TKN)	$0.33	$0.42	$0.53
Total Phosphorus	$1.64	$2.10	$2.65
Animal and Vegetable Oil & Grease[2]	$0.33	$0.42	$0.53
Dewatering Discharge Application			
Application fee	n/a	$700	$700
Volumetric discharge fee to sanitary sewer (per cubic meter)[3]	$0.37	$0.89	$0.99
Environmental Site Assessment Request	$75	$125	$125

[1] Will be adjusted annually based on actual wastewater treatment costs.
[2] Effective November 2011, no new surcharge agreements will be permitted for animal and vegetable oil and grease. Existing agreements will be phased out.
[3] Will match actual wastewater rate beginning in 2012

Program costs will be recovered by updated service rates and wastewater rates

Implementation of the Sewer Use Compliance Program Strategy is geared towards enhancing the sewer use program and requires additional overhead costs. However, it is anticipated that with the updated rates and enhancements to the program, increased costs for the surcharge program should be fully recoverable. Regular administrative and operating costs are included in the wastewater rates charged to local municipalities. Other savings, such as reduction in damaged infrastructure or process interruptions are additional benefits of the improved program. Table 5 contains details of the proposed financial investments for capital and operating improvement initiatives required between 2012 and 2015 for the enhancement of the Sewer Use Compliance Program.

Table 5
Key Additional Capital and Operating Cost Requirements
for the Enhanced Sewer Use Compliance Program (2012-2015)

Description	2012	2013	2014	2015
Operating Costs:				
Staffing Expenses (additional staff only)[1]	$72,100	$72,100	-	$72,100
Laboratory fees (additional samples only)[2]	$90,800	$92,600	-	$96,400
Vehicle Fuel, Maintenance, and Replacement Contribution[3]	$6,100	6,100	-	$6,100
Subtotal Operating Costs	***$169,000***	***$170,800***	***-***	***$174,600***
Capital Costs:			-	
Vehicles (for sampling purposes); one in 2012; one in 2013; one in 2014	$60,000	$60,000	-	$60,000
Sampling Equipment (including auto samplers)	$240,000	$240,000	-	$240,000
Instrumentation (i.e. pH meters, etc.)	$40,000	$40,000	-	$40,000
Sampling Bottles and additional equipment	$10,000	$10,000	-	$10,000
Subtotal Capital Costs	***$350,000***	***$350,000***	***-***	***$350,000***
TOTAL	**$519,000**	**$520,800**	**-**	**$524,600**

[1] Based on average annual salary and benefits of $72,100. Staffing additions as follows; one in 2012; one in 2013; one in 2015.
[2] Risk-based sampling program will be developed in 2012 and expected to be implemented in January 2013. This may reflect a significant increase in monitoring and sampling activity
[3] Based on average vehicle operating cost of $6,100 per vehicle

With the enhanced strategy in place, increased cost recovery will result from the anticipated rise in the number of surcharge agreements coupled with higher surcharge rates, dewatering discharge permits, Environmental Site Assessment information requests and potentially from Sewer Use Bylaw violations and fines.

Table 6 outlines the projected program revenues from all sources excluding hauled waste revenues, fines and prosecutions. Hauled Waste costs and revenues will be addressed in a future report to Environmental Services Committee, expected in November 2011. This assessment includes conservative estimates for future revenues and program expenditures. Although program revenue will increase, an increase in monitoring of high to medium risk industries is also expected with the program enhancements. Increased monitoring and analysis related to these newly identified dischargers may not be included in surcharge revenues as they may be ineligible for the program (i.e. parameters outside of the five previously listed are not eligible for surcharge agreements). Increased costs

associated with these activities will be included in the wastewater rate charged to the local municipalities.

Table 6
Projected Program Revenue

Program Revenues	2012	2013	2014	2015
Surcharge Agreements				
No. of Surcharge Agreements	57	63	69	76
New Surcharge Agreement Fee[1]	$1,500	$1,800	$1,800	$2,100
Annual Account Fee[2]	$34,200	$37,800	$41,400	$45,600
Surcharge Revenue[3]	$364,800	$510,300	$586,500	$676,400
Discharge Requests to Sanitary				
Request Application Fee[4]	$5,600	$5,600	$5,600	$5,600
Volumetric Discharge Fee[5]	$14,400	$16,200	$18,100	$20,300
Environmental Site Assessment Information Request				
Information Request Fee[6]	$10,600	$10,600	$10,600	$10,600
TOTAL	$431,101	$582,300	$664,000	$760,600

1. One time initiation fee of $300
2. Annual account fee of $600
3. Based on the number of surcharge agreements multiplied by corresponding average revenue per surcharge agreement ($6,400 for 2012, $8,100 for 2013, $8,500 for 2014 and $8,900 for 2015).
4. Based on average of 8 applications per year (2008-2011) multiplied by application fee of $700.
5. Based on average discharge volume of 16,300 m^3 per year multiplied by actual wastewater rate
6. Based on average of 85 requests per year (2008-2010) multiplied by fee of $125

6. LOCAL MUNICIPAL IMPACT

York Region has engaged with local municipalities to develop an integrated approach to sewer use service delivery

A task force was developed to gain a better understanding of local municipal issues, concerns, and strengths in terms of sewer use. The task force was comprised of Regional staff, staff from the Towns of Markham, Richmond Hill, Whitchurch-Stouffville, and Aurora and was constructed to include representation from a cross section of local municipalities to reflect the needs of the entire region. The preliminary workshops included discussions on:

1. Roles and Responsibilities — January 28, 2011
2. Business Processes — March 10, 2011
3. Communication and Data Sharing — April 12, 2011
4. Rates and Cost Recovery — May 16, 2011

Consensus was achieved in several key areas including communication and increased involvement of local municipal staff in business processes

Roles and responsibilities on sewer use activities were reviewed in light of limited resources available at a number of local municipalities. To this end, the agreed approach for the short term involves a collaboration of efforts and sharing of tools, information, processes and techniques. Discussions will continue with local municipalities to explore options for sharing enforcement responsibilities. Results have already been recognized since the workshop, as staff from the Town of Markham and the Region have been working together and sharing information regarding a specific non-compliant discharger.

Business processes involving local municipalities have been developed to improve communication and information sharing. It was recognized that input from local municipalities is essential as local infrastructure is at the greatest risk of being impacted by discharges. Workshop attendees identified the following key processes that would benefit from greater involvement of local municipalities:

- Discharge Approval Requests- for temporary dewatering projects
- Surcharge Agreements
- Violation Notification
- Enforcement Notification
- Compliance Program
- Initial Data Collection for Industrial Dischargers

Since surcharge rates are calculated based on the Region's treatment costs, the potential for local municipalities to recover costs by evaluating future agreements was discussed. Opportunities to recover costs from temporary dewatering discharge requests were also discussed. Involvement of local municipalities in these processes will ensure opportunities for cost recovery are captured at both levels of municipal government. Some of the functions and features required in a future data system that will make communication stronger were also highlighted.

Concern surrounding oil and grease as a surchargeable parameter was communicated to York Region by local municipal staff. There exists a significant gap within existing legislative frameworks for the ongoing monitoring and maintenance of oil and grease interceptors. Under the current Building Code, these units are required as part of the plumbing for all industrial, commercial and institutional facilities that would process or prepare food. However, the Building Code makes no provision for maintenance leaving the local municipal building inspectors no power to enforce should they observe faulty or ill maintained units in operation. The proposed Sewer Use By-Law will close this gap by requiring that grease trap units are maintained per manufacturer recommendations and that records are stored on site to demonstrate maintenance. Moving forward, York Region will no longer issue oil and grease surcharge agreements and will work to phase out existing oil and grease surcharge agreements. Future liaison with local municipalities on communication regarding grease trap will involve local municipal building departments.

Overall, feedback from the workshops was positive and the workshops were found to be beneficial. It was also recognized that a unified vision and priority setting framework was needed prior to clearly defining roles and responsibilities.

Results from workshops have set the framework to develop guiding principles for the future of two tier service delivery in York Region

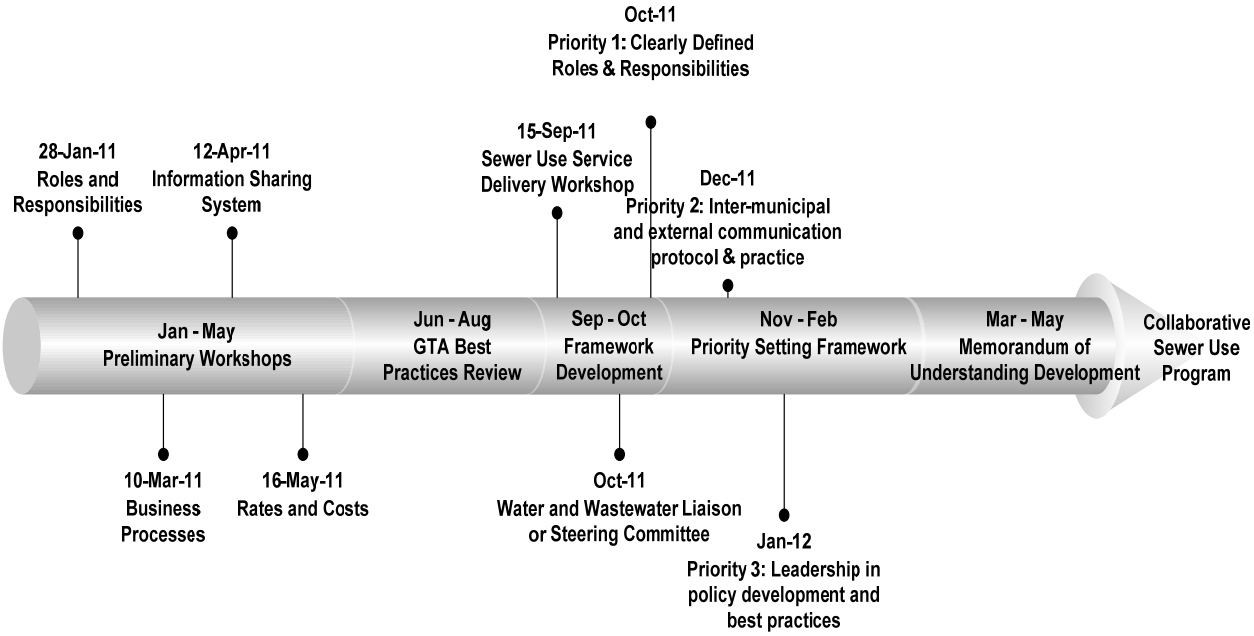
On September 15, 2011 a workshop was held with Regional and local municipal staff. Participants included broad representation from Director, Manager and Operations levels from both Region and local municipal staff to ensure buy-in on the path to a successful collaborative sewer use program. The main objectives of the workshop included the development of the core principles of a collaborative sewer use compliance program along with the framework for program implementation. The workshop was well attended with fair representation from both levels of municipal government.

By consensus, participants brainstormed guiding principles that are important for developing a collaborative sewer use delivery service. The top three principles included the need for clearly defined roles and responsibilities; external and inter-municipal communication protocols and practice, and; leadership in policy development and best practices. Other principles developed revolved around program financial sustainability, efficiency and consistency in enforcement, and transparency and equity within the program.

After the consideration of actual scenarios depicting the interaction of both Regional and local compliance programs, participants then incorporated the developed principles into a series of statements describing a vision for a future collaborative program (*see Attachment 3*). These materials will be summarized for future consideration by the Water and Wastewater Liaison Committee and Steering Committee.

Figure 2 describes the timeline for developing a collaborative sewer use delivery service based on common principles and vision.

Figure 2
Timeline for Developing Collaborative Sewer Use Delivery Service



7. CONCLUSION

This report provides Regional Council with an update on current and future activities within the Region's Sewer Use Compliance team. The program's enhancement will respond to a growing population and an increasing number of industrial, commercial and institutional dischargers entering Regional boundaries, while helping to ensure that the Region remains in compliance with its contractual service obligations to the Regions of Durham and Peel. York Region's Sewer Use Compliance Program plays a vital role in protecting public health and safety, the environment, and Regional and municipal infrastructure. The Sewer Use Compliance team intends to bring the updated Sewer Use By-Law to Council in November 2011.

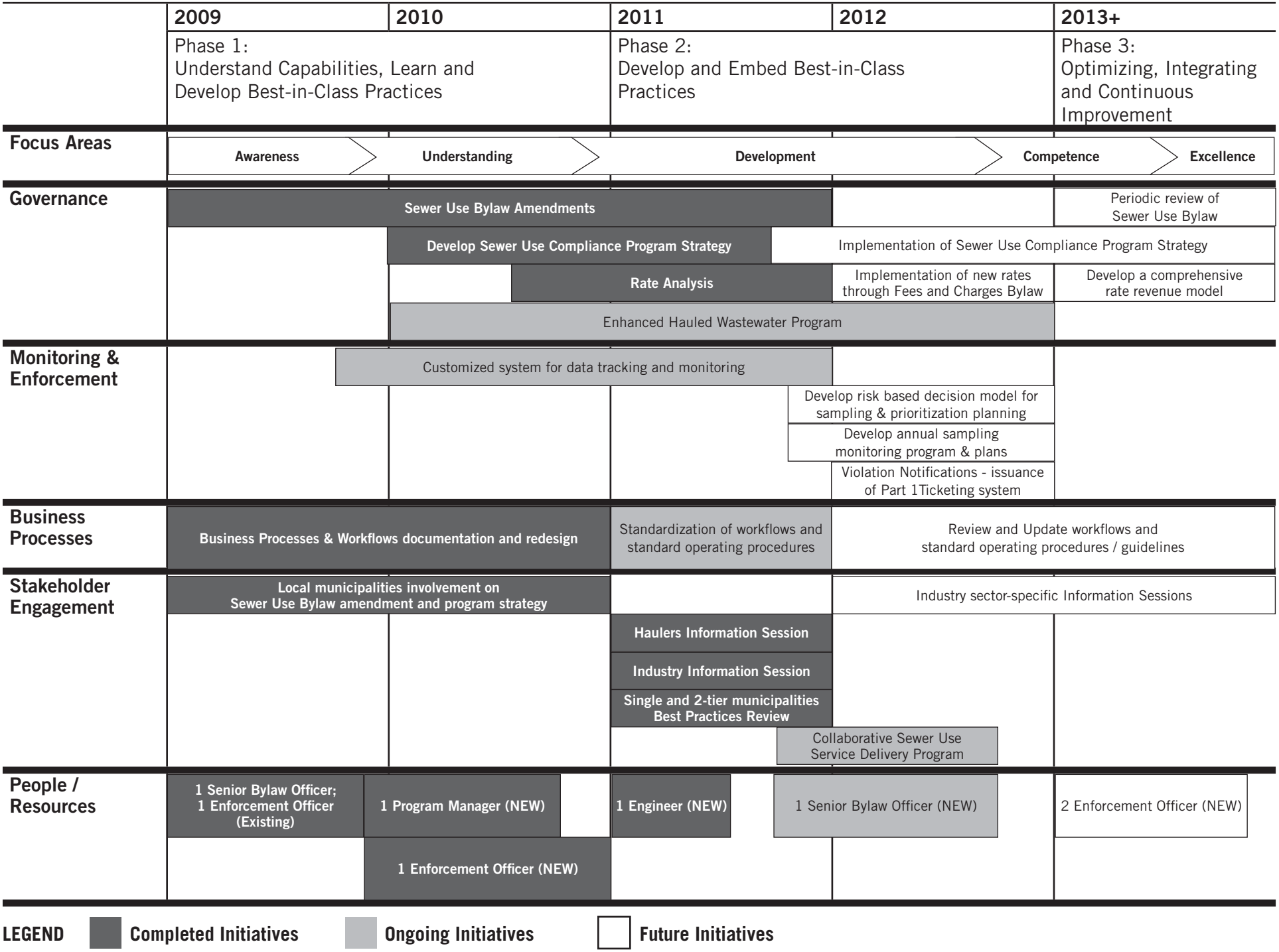
Execution of an effective Sewer Use Compliance Program will proactively respond to increasing regulatory pressures and requirements to ensure that the Region is able to promptly take action in the event that new regulations are introduced. With adequate resources and appropriate equipment to implement the Sewer Use Compliance Program Strategy, the Region will continue its leadership role.

For more information on this report, please contact Laura McDowell, Director, Environmental Promotion and Protection, Environmental Services Department at 905 830-4444, Ext. 5077.

The Senior Management Group has reviewed this report.

(The three attachments referred to in this clause are attached to this report.)

YORK REGION SEWER USE BYLAW ROADMAP



Council Attachment 1

Council Attachment 2

Environmental Services

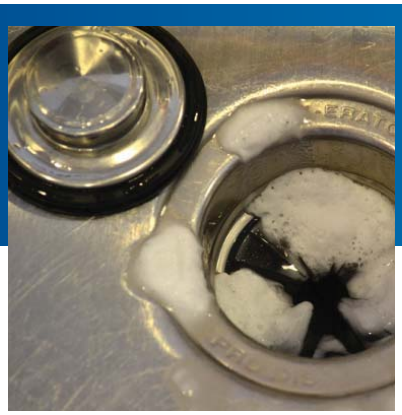
FACTsheet

Environmental Monitoring and Enforcement Unit

Food Waste Grinders

Last updated: August 2011

York Region



Environmental Monitoring and Enforcement Unit

DID YOU KNOW?

The Green Bin Program can divert more than 40 per cent of waste from landfill. The material collected is composted and used for agricultural and horticultural use, as well as land reclamation projects and erosion control.

Composting can reduce household waste by 30 per cent.

Ottawa, Kingston and Cobourg ban food waste grinders. Toronto has a partial ban for combined sewer areas and industrial use.

Food Waste Grinders

What are food waste grinders?

- Devices installed beneath the kitchen sink for grinding food wastes, also called garburators or garbage grinders
- Following the grinding process, food waste matter is flushed down the drain into the sanitary sewer system

How do food waste grinders affect York Region's sewer system?

- Potentially increase operational costs due to high levels of solids in the sewer system
- Contribute to the generation of hydrogen sulphide gas, which causes corrosion of infrastructure
- Cause blockages requiring more frequent maintenance and replacement of infrastructure
- Result in a decline in treatment efficiency by overloading treatment plants not designed to handle heavy organic loads
- Increased organic loading can reduce treatment capacity required to support industrial, commercial, institutional and residential development

How do food waste grinders affect you?

Social

- High organic concentrations in wastewater generate hydrogen sulphide gas which can cause nausea, vomiting and stomach pain
- Blockages can cause sewage to overflow into homes, streets, parks and storm sewers, leading to health risks from exposure to disease-causing bacteria and viruses

Economic

- Overflows can interrupt business operations and require facility closures for cleaning and expensive plumbing repairs
- Higher energy and water bills
- Potential rate increases to offset higher capital and operating costs for treating solids
- Water used to flush organics through the system must be treated again, wasting drinking water and tax dollars

Environmental

- Sanitary sewer overflows may cause raw sewage to directly enter the natural environment
- Impacts of organics on aquatic ecosystems:
  - Biochemical oxygen demand: increased levels of organics consume more dissolved oxygen, which fish and other aquatic organisms need to survive
  - Suspended solids: degrades aquatic spawning habitat

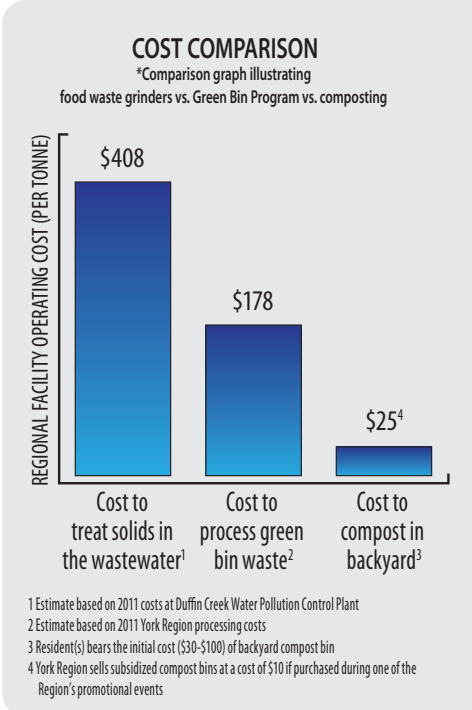
What are alternative disposal options for food waste?

Green Bin Program:

- Organics are collected through curbside collection and processed at a composting facility
- Compost is used in a variety of applications including horticultural and agricultural use, land reclamation and roadside erosion control
- Fruits and vegetables, meat and fish products, grain products, baked goods, baking ingredients, dairy products and other food products are accepted in the Green Bin Program

Backyard Composting:

- Food and yard waste can naturally be broken down into nutrient-rich material which can be added to gardens
- Fruits and vegetables, rice, bread and pasta (no oil or sauce), coffee grounds and filters, tea bags/leaves and egg shells can all be used in backyard composting



1 Estimate based on 2011 costs at Duffin Creek Water Pollution Control Plant
2 Estimate based on 2011 York Region processing costs
3 Resident(s) bears the initial cost ($30-$100) of backyard compost bin
4 York Region sells subsidized compost bins at a cost of $10 if purchased during one of the Region's promotional events

PRINCIPLES AND VISION OF FUTURE COLLABORATIVE SEWER USE PROGRAM

Guiding Principles:

1. Clearly defined roles and responsibilities
2. Inter-municipal and external communication protocol and practice
3. Leadership in policy development and best practices
4. Effective and consistent enforcement
5. Universal application of the bylaws must be applied
6. Financial sustainability
7. Transparent equitable and engaging program

Vision Statements:

1. On a regular basis **effective collaboration and communication** is required to maintain a successful Sewer Use Program. It will include:
    a. A collaborative effort amongst parties (municipal, regional and stakeholder involvement)
    b. Notification procedures
    c. Proactive management of the program and procedures
    d. Region-wide database established for sharing information
    e. Regular on-going communication and meetings amongst partners
    f. Working to reduce duplication between municipal programs

    It will leverage on the following existing: policies, resources, knowledge, and existing partnerships

2. A proactive, **sustainable program** that promotes best practices, and whose goal is to: protect the environment, protect the public, and protect our combined infrastructure. This will be achieved through effective educational and enforcement strategies and programs.

3. Sewer Use Program will have **clearly defined roles and responsibilities** for the local municipalities and the Region including communication protocol. This program must strive to ensure efficient alignment of services provided by the province, region and local municipality. Communication between the Province, Region and Local Municipalities for new businesses and potential hazard identification.

4. **Clearly defined implementation plan** to ensure protection of public, assets, environment and stakeholders. Implementation will need to include:
    a. Standards across Region
    b. Protocols
    c. Effective and consistent enforcement

d. Practical, accessible and easy to use procedures
e. Defined goals and timelines

It will leverage on the following existing:

a. Business process
b. Staff inter-municipal committees
c. Commonly accepted industry standards
d. Knowledge and experience
e. New technologies

5. **Proactive support and education program** to achieve awareness and compliance. It will need to include:
    a. Adequate resources such as staff, literature, funding
    b. Public meetings
    c. Site visits
    d. Online communication/information
    e. Publishing recent standards/guidelines
    f. Easily accessible information
    g. Targeted topics
    h. Awareness of compliance benefits for community and environment
    i. Leverage schools, media, bills, invoices