

THE REGIONAL MUNICIPALITY OF YORK

Environmental Services Committee
November 9, 2011
Report of the
Commissioner of Environmental Services

HAULED WASTEWATER PROGRAM POLICY AND FEE UPDATE

1. RECOMMENDATIONS

It is recommended that:

1. Regional Council endorse the Hauled Wastewater Program Policy, and associated fees and rates, effective May 1, 2012.
2. Regional Council authorize the amendment of Schedule “A” to the Fees and Charges Bylaw (Bylaw 2010-15) to implement the proposed fees described in Table 5 of this report.

2. PURPOSE

The purpose of this report is to seek Council’s endorsement of the new Hauled Wastewater Program policy and associated fees and charges.

3. BACKGROUND

The Region provides hauled wastewater receiving services to residents and businesses on private wastewater systems

Approximately 120,000 residents and businesses in York Region use their own septic or wastewater holding systems which require regular maintenance and wastewater haulage services. To assist in providing services to these residents and businesses, the Region has three wastewater facilities available to receive certain types of hauled wastewater: the Aurora Pumping Station in the Town of Aurora serving central and southern areas of the Region, the Sutton Water Pollution Control Plant located in the Town of Georgina, serving specifically the Town of Georgina, and the Duffin Creek Water Pollution Control Plant in the City of Pickering, accepting hauled wastewater from any area in York Region. This facility is operated by Durham Region and it has its own hauled wastewater program and policy

Structure of current hauled wastewater program

The current Hauled Wastewater Program (the “Program”) is jointly managed by Environmental Services Department’s Operations Maintenance and Monitoring Branch, and Environmental Promotion and Protection Branch. Registration of the haulage service providers (the “Haulers”) in the Program is handled by the Sewer Use Compliance Team in Environmental Promotion and Protection, while Operations Maintenance and Monitoring is responsible for operational and other administrative components of the Program.

Administration and operation of the current Program are based largely on the following procedures and requirements documented in Operations Maintenance and Monitoring’s ISO14001 Management System:

- Waste Hauler Approval (procedures about processing, approving, and registering a Hauler to the Program)
- Hauled Sewage Dumping (procedures and requirements about the disposal of hauled wastewater at the receiving facilities)
- Receipt of Manifested Waste (procedures and requirements about the disposal of hauled wastewater regulated by the Ministry of the Environment)
- Aurora Pumping Station Dump Pad Closure (procedures on communication to Haulers about facility closure)
- Dumping Program and Transfer of Waste Receipts (procedures about tracking and managing information generated from the Program)

Currently, Haulers have 24/7 access to the Region’s hauled wastewater receiving sites, and volumetric billing is based on an “honour” system, which requires the Hauler to complete a ticket indicating the volume and source of wastewater discharged during each visit.

Changes needed to the current hauled wastewater program to mitigate potential risks and liabilities to the Region

Recent experiences concerning discharges into the designated hauled wastewater receiving facilities, specifically the Aurora Pumping Station and the Sutton Water Pollution Control Plant (“Facilities”), have highlighted a level of risk exposure. For example, needles and animal hooves have been found at receiving facilities potentially exposing staff to disease. Also, heavy grit mixed with hauled wastewater discharges and receiving material that the sewage collection and treatment system is not designed to manage at the facilities has been linked to premature wear of pump impellers at the Aurora Pumping Station.

Current risks and limitations of the existing program include:

- One time registration can result in outdated contact and billing information as well as access to the Facilities by companies who no longer operate
- Limited monitoring requirements can potentially result in prohibited materials being disposed at the Facilities

- Unknown quality of hauled wastewater can potentially result in adverse impacts on the equipment, and poses health and safety concern to staff
- Out-dated hauled wastewater disposal rate will not allow York Region to fully recover the costs of providing hauled wastewater receiving services

Enhanced hauled wastewater program protects public, staff, infrastructure and environment

York Region is formalizing and updating its hauled wastewater program policy to align with changing regulatory requirements, protect employee health and safety, and protect the environment. Ultimately, these enhancements will help to protect the Region’s sewage infrastructure by deterring the discharge of prohibited substances which could cause premature degradation of operating equipment, at the Facilities while ensuring that the Region is fully compensated for the service.

Opportunities to improve the Region’s current hauled wastewater program include:

- Control on administrative information to ensure contact information for the Haulers is accurate and determine validity of registrations
- Establishing monitoring and sampling requirements to identify the type and quality of the wastewater and prevent prohibited substances from being disposed of at Regional facilities
- Verification of volume of hauled wastewater received to ensure accurate billing and cost recovery
- Updating disposal rates to adequately recover costs associated with treatment and operations

4. ANALYSIS AND OPTIONS

It is necessary to establish a formal policy for the hauled wastewater program to address current issues

Establishing a formal policy for the Program will help to define requirements, provide guidance, and mitigate existing Program risks. Since early 2009, staff have worked in collaboration with Legal Services to draft a proposed new Hauled Wastewater Program Policy (the “Policy”).

The purpose of the Policy is to:

1. Regulate the discharge of hauled wastewater to the receiving facilities.
2. Establish registration requirements and procedures for haulers.
3. Classify the types of hauled wastewater that may be accepted for disposal at the receiving facilities.
4. Set out monitoring and sampling requirements for hauled wastewater.
5. Set out the consequences for violations of the Policy.

The proposed Policy is included as an attachment and provides detailed information about the Program's components (*see Attachment 1*). Key highlights of the proposed changes include:

- Annual registration for Haulers
- Reduction of service hours at the Aurora Pumping Station and Sutton Water Pollution Control Plant, from daily 24/7 access to 6 am to 6pm, Monday through Friday
- Fees and notification requirements for emergency disposal access
- Increased disposal rates and an introduction of user service fees

Attachment 2 summarizes the new policy and provides a comparison between the current and the proposed program. (*see Attachment 2*)

Comments received from consultation with the haulage industry has helped to refine the proposed Policy

To be fair and transparent in setting these new standards for the Program in the Policy, the Region consulted the haulers to gain insight into the potential impact on the haulage industry, and to provide them an avenue to voice their concerns.

The first consultation was held on August 25, 2009 to review proposed changes and requirements with the haulers. A draft policy and a document highlighting the key changes were given to the Haulers with a two-week period for review and comment. A total of six responses were received. The major concern was about the change to the operating hours, from 24/7 access to regular business hours.

Over the last two years, various types of operating models were tested to help determine resource requirements for the proposed changes. Monitoring activities were completed at the Aurora Pumping Station, which helped staff evaluate the practicality of the changes. Staff also reviewed Hauled Wastewater Program strategies from municipalities throughout Ontario to identify areas of commonality and best practices. A risk assessment was conducted at the Aurora Pumping Station by the staff and findings from the assessment were incorporated in the Policy.

Revisions were made to the Policy to streamline the Program's processes and to simplify the language, making the draft easier to understand while preserving the framework of the Policy. The "Emergency after hours disposal" protocol was further refined to address haulers' concerns with reduced operating hours. A second consultation was held on August 9, 2011 to communicate the updated Policy. A total of 51 comments and questions were documented with the main concerns being the reduced operating hours, fees for emergency after-hours disposal, and billing based on full truck capacity.

On September 7, 2011, the Region met with the President of National Association of Wastewater Transporters, representing the wastewater haulage industry, to review Policy revisions that addressed comments and concerns raised at the second consultation. Constructive and practical suggestions were gathered for further consideration in finalizing the Policy. It was also agreed that future program materials, such as best

practices and health and safety information, may be communicated to the wastewater haulage industry through the National Association of Wastewater Transporters.

Consultation with Greater Toronto Area and surrounding municipalities provides solid data in support of new program operating hours

Staff consulted several municipalities to share program information and discuss challenges in running the Hauled Wastewater Program. Operating hours from neighbouring municipalities reviewed to validate the reduction in York Region operating hours from 24/7 at all facilities to business hours at some facilities (Table 1). Throughout the GTA, only three facilities maintain 24/7 access for the purpose of receiving hauled waste. These sites either have automated processes to quantify and sample the received wastewater, or have 24-hour staff on site.

Table 1
GTA and other municipalities Hauled Waste Facilities Disposal Hours

Municipalities	Hours of Operation	Days of Operation	Notes
Brantford	6:00 a.m. to 9:00 p.m.	7 days/week	
Halton	8:00 a.m. to 4:00 p.m. 24 hours	Monday -Friday 7 days per week	Four facilities One out of four facilities with access for emergency disposal only
Peel	6 a.m. to 9 p.m. 24 hours	Monday – Friday 7 days per week	Weekend access for emergencies only One facility with security system in place
Kingston	7:30 a.m. to 3:30 p.m.	Monday - Friday	
Toronto	7:30 a.m. to 3:30 p.m.	Monday - Friday	
Durham	7:30 a.m. to 3:30 p.m.	Monday - Friday	
York-Durham	24 hours	7 days per week	Duffin Creek Water Pollution Control Plant is staffed continuously
Niagara	7:30 a.m. to 4:30 p.m.	7 days per week	
Waterloo	7:30 a.m. to 3:30 p.m.	Monday to Friday	

Currently, 75 per cent of discharges at Regional facilities occur between 8 am to 4 pm, Monday through Friday

Access activity to the Aurora Pumping Station is time and date stamped when the Hauler uses the access card at the entry gate. At the Sutton Water Pollution Control Plant, Hauler access is not time stamped. A review of year-to-date activity at the Aurora Pumping Station identified that approximately 75 per cent of discharges occur during normal

operating hours, Monday through Friday (Table 2). Using this same data, expanding the operating hours to 6 am to 6pm, Monday through Friday, is expected to capture approximately 88 per cent of discharges. The Duffin Creek Water Pollution Plant is accessible 24 hours per day, every day of the week. There are also provisions within the policy that allow for emergency discharge access for a fee.

Table 2
Breakdown of Current Hauled Wastewater Discharge Activity in
Aurora Pumping Station by Percentage of All Discharges

Operating Hours	Usage (%)	Avg. # of visits per week
8AM - 4PM		
Monday – Friday	75	56
Saturday	4	3
Sunday	1	1
6 AM– 6PM		
Monday – Friday	88	66
Saturday	5	3
Sunday	1	1

Total number of visits at Aurora PS (Jan – Aug) = 2558
Average number of visits per week ≈ 75

Total annual hauled wastewater volume received at both facilities varied over the past five (5) years. The data indicated there was a slight upward trend of the amount of hauled wastewater received at Aurora Pumping Station, while there was a significant downward trend at Sutton Water Pollution Control Plant. Table 3 summarizes the total annual volume received at both facilities. Variability at either location may be due to the number of haulers in operation, residential septic system maintenance cycles, and other Regional operational maintenance activities.

Table 3
Summary of Hauled Wastewater Volume Received at Aurora Pumping Station
and Sutton Water Pollution Control Plant

Facility	Volume Received (m³)				
	2006	2007	2008	2009	2010
Aurora Pumping Station	31,201	33,624	47,703	40,790	30,078
Sutton Water Pollution Control Plant	12,060	5,169	2,794	2,198	2,300
Total Volume	43,261	38,793	50,497	42,987	32,379

Implementing an automated dedicated hauled wastewater receiving facility presents an opportunity for the Region to increase Program efficiency

Staff within the Strategy and Business Planning Branch completed a study in July 2011 that recommended an automated hauled wastewater receiving facility be constructed south of the Oak Ridges Moraine to alleviate operating costs of sludge management from all York Region satellite water pollution control plants (excluding Duffin Creek Water Pollution Control Plant). The recommendation suggested that the facility be located in such a location that received solids could be gravity fed through the York-Durham Sewage System, eliminating the need for pumping. This approach would minimize excessive wear and tear on the Region's existing receiving facilities, and presents an opportunity to consolidate hauled wastewater receiving services from currently designated facilities to this potential facility along with the solids collected at the Region's satellite water pollution control plants. In this event, the hauled waste receiving program would contribute approximately 25 per cent of the total volume of material handled at the proposed facility.

A fully automated hauled wastewater receiving system including security, flow measurement, sampling, and monitoring capabilities would be able to facilitate the monitoring and sampling requirements of the proposed Policy. As a result, the overall program efficiency would be improved. Further consideration of this preliminary study and recommendations is required prior to inclusion in the capital plan. If it is determined to proceed with the recommendation for a fully automated hauled wastewater receiving station, it is anticipated that the proposed dedicated facility may be commissioned within three to five years. In the short term, the Sutton Water Pollution Control Plant can be retrofitted to automate the site's hauled waste receiving facilities. However, the Aurora Pumping Station would require detailed design and construction to do the same.

The proposed Policy considers stakeholder consultation while maintaining the need to protect the Region's infrastructure

The final draft of the Policy has been completed based on information gathered through stakeholder engagement as well as through internal assessments of Regional needs. As a result, the Policy incorporates requirements and preventative measures that will:

- mitigate potential impacts on the Facilities from hauled wastewater
- better protect the health and safety of the public and staff
- help achieve a true cost recoverable program
- be fair to the wastewater haulage industry

A communication campaign will be developed to inform private septic system owners on the proposed program changes

Throughout the first quarter of 2012, the Region will communicate new Program requirements and disposal rates to septic system owners. The purpose of this undertaking is to educate residents about the changes and to identify opportunities to minimize service disruptions and mitigate cost impacts. A full communication campaign will be developed

and delivered in a multi media format through the Region’s official website, York Works, and distribution of information pamphlets. Staff will initiate the planning of the campaign towards the end of 2011.

Link to Key Council-approved Plans

The enhanced hauled wastewater program aligns with the 2011-2015 Strategic Plan goals:

- Continue to deliver and sustain critical infrastructure – through proactive protection of our infrastructure and assets
- Manage the Region’s finances prudently – ensuring full cost recovery through effective rates and billing practices
- Strengthen organizational capacity – through implementation of best practices, continuous improvement, and efficient use of existing resources

5. FINANCIAL IMPLICATIONS

Proposed Policy will help to ensure full cost recovery

To provide a sustainable Hauled Wastewater Program for serving septic system owners in the Region, it is necessary to have a fully cost recoverable program. Hauled Wastewater discharge rates have not been amended since 2007. Currently, York Region pays treatment fees to the Region of Durham for processing of hauled waste received through the Region’s facilities. The current York Region hauled wastewater discharge rate is insufficient to fully recover the cost of treatment and transmission to the Duffin Creek Water Pollution Control Plant (Table 4).

Table 4
Current Hauled Wastewater Discharge Rates

Duffin Creek Water Pollution Control Plant	Aurora Pumping Station	Sutton Water Pollution Control Plant
\$ 70.27 per 1000 lgal \$15.47 per m ³	\$ 60.92 per 1000 gal \$13.40 per m ³	\$ 42.11 per 1000 gal \$9.27 per m ³

A combination of service fees and an increase in hauled wastewater discharge rates have been proposed to ensure full cost recovery. Table 5 summarizes the proposed rates and service fees, with a two-year phase in provision to achieve full cost recovery by 2013. Table 6 compares York Region’s hauled wastewater rate with other GTA municipalities. Attachment 3 provides a graphical illustration of the disposal cost adjustment impact. (see Attachment 3)

Table 5
Comparison of Program Rates and Proposed Fees and Charges

Service / Activity	Proposed Fee		
	Current Fee 2011	2012	2013
Hauler registration fee (annually)	-	\$160	\$160
Access card issuance/replacement fee (per card)	-	\$50	\$50
Volumetric discharge fee (Aurora PS and Sutton WPCP) per m ³ (per 1000 gallons)	\$13.40 (\$60.92)	\$16.20 (\$73.65)	\$19.60 (\$89.11)
Emergency After-hours Disposal Fee	-	\$65 per hour (3 hrs minimum charge)	\$65 per hour (3 hrs minimum charge)

Table 6
Comparison of Hauled Wastewater Rates with other GTA Municipalities

Service / Activity	2011				
	York	Toronto	Halton	Peel	Durham
Volumetric discharge fee - Aurora PS and Sutton WPCP per m ³ (per 1000 gallons)	\$13.40 (\$60.92)	\$26.84 (\$122.01)	\$4.92 (\$22.38)	\$2.86 (\$13.00)	\$15.46 (\$70.27)
Hauled wastewater charge for typical load ¹	\$121.84	\$244.02	\$44.76	\$26.00	\$140.54

¹ Typical load: 9 m³ or 2,000 Gallons

A two-year phased in approach is proposed to help septic owners and haulers adapt to the full disposal rate adjustments

An immediate adjustment of wastewater discharge rates to a fully recoverable rate would require a 33 per cent rate increase. To help mitigate the cost impacts to residents and haulers, a two-year phased in approach is proposed that would make the Program cost recoverable by 2013

Disposal volumetric charges will be calculated based on 85 per cent of the tank capacity

The Region currently does not have the capability to quantify the volume of hauled wastewater discharged into the sanitary system at either of the Facilities. A review of the billing practices of 23 municipalities throughout Ontario determined that a common practice was to determine the discharged volume based on between 80 per cent and 100 per cent of the vehicle capacity. To accommodate specific weight restrictions on hauler vehicles imposed by the Ministry of Transportation during the spring thaw, and the fact

that during the winter, a truck cannot be filled to 100 per cent capacity due to freezing concerns, the Region’s Policy will determine the volumetric charge based on 85 per cent of the vehicle capacity. This approach is comparable to municipalities across Ontario.

Emergency after-hours disposal charges reflect full cost of providing the service

Twenty-four hour, daily access is available at the Duffin Creek Water Pollution Control Plant to accept discharge of hauled wastewater. However, should an emergency require the operation of either the Aurora Pumping Station or the Sutton Water Pollution Control Plant, this could be accommodated. In these circumstances, a licensed Operator will be required to be present at the Facility. According to the Working Labour Agreement between the Region and the CUPE Local 905 an on-call operator is entitled to receive a minimum of three hours paid for a call out. Therefore, the emergency after-hours disposal fees charged to Haulers are true costs of providing this after-hours service.

Total service fees are comparable between serviced and non-serviced residents

Septic system owners may be impacted by the increased proposed rates and fees as the service fees charged by the Haulers might increase across the industry. However, these new rates and charges are established to ensure that the Region is recovering the costs associated with providing services to receive hauled wastewater. As a comparison, residents currently receiving wastewater service via the York-Durham Sewage System pay an annual cost of approximately \$360, while a non-serviced resident having a 2000 gallon septic holding tank may pay approximately \$100 to \$150 annually, assuming that the tank is pumped out every two years. Under this analysis, the comparative costs between serviced and non-serviced residents reflect fair treatment of taxpayers.

New fees and charges will help better recover all program associated costs

2010 revenues from the Hauled Wastewater Program was approximately \$425,000, and projected revenue for 2011 is estimated at approximately \$540,000. With the proposed fees and charges, the program will be able to better recover all associated costs of providing the service. Table 7 summarizes the projected program revenues over the two year phase in period.

Table 7
Projected Program Revenue

Program Revenues	2012	2013
Hauled Waste Program		
Annual Registration Fee ¹	\$4,800	\$4,800
Hauled Wastewater Recovery – Aurora ²	\$680,380	\$823,240
TOTAL	\$685,180	\$828,040

1. Based on average of 30 registered haulers annually (2008-2010)

2. Based on average volume of 42,000 cubic meters per year multiplied by proposed hauled waste rate in Table 5

A temporary full time staff may be required to implement and maintain the new Hauled Wastewater Program

Until plans for the proposed automated hauled wastewater receiving facility are finalized, Environmental Promotion and Protection will utilize its existing staffing resources to facilitate the monitoring and enforcement component of the Policy, and the management of Program associated data. Random inspections of disposal activities at either Facility will be conducted to ensure compliance. The effectiveness and efficiency of operating the new Program will be evaluated six months after the implementation date. Depending on the outcome of the performance evaluation, a temporary full time position may be required to undertake the additional work load in excess of the capacity of existing staff. This additional staff member would also play a vital role to ensure the program is administered and enforced effectively.

Currently, a data management system is being developed to process all information generated from the Sewer Use Compliance Program, which includes the Hauled Wastewater Program. The system is expected to be implemented Q1 2012. Once in place, it will help alleviate administrative work associated with the Program. If necessary, a staffing analysis will be undertaken to determine if this Program requires permanent resources to maximize its efficiency.

Monitoring and sampling components of the program will have annual costs of approximately \$28,000

To better understand the characteristics of the hauled wastewater discharged at the Facilities, it is necessary to periodically screen loads of hauled wastewater. A sampling regime will be implemented to reduce risk and mitigate infrastructure impacts, while providing a baseline for the quality and composition of the hauled wastewater. Once sufficient information is gathered, compliance standards can be established. Based on the 2010 laboratory analysis cost schedule at York-Durham Environmental Laboratory, annual sampling and analysis costs, will be approximately \$28,000.

Table 8 summarizes the potential additional capital and operating costs associated with the new hauled waste program.

Table 8
Potential Additional Capital and Operating Cost for the New Program

Description	2012	2013
Operating Costs:		
Staffing Expenses (additional TFT) ¹	\$72,100	\$73,500
Laboratory fees ²	\$28,000	\$28,500
Subtotal Operating Costs	\$100,100	\$102,000
Capital Costs:		
Sampling Bottles and additional equipment	\$10,000	\$10,000
Subtotal Capital Costs	\$10,000	\$10,000
TOTAL	\$110,100	\$112,000

¹ Based on average annual salary and benefits of \$72,100, and assuming a 2 per cent increase for 2013;

² Laboratory fee is based on the number of samples per year multiplied by average lab fee per sample. Average samples per week is 5.

6. LOCAL MUNICIPAL IMPACT

The Hauled Wastewater Program is operated by the Region; therefore, the proposed Policy will not have any direct impact on the local municipalities and their sanitary systems.

Businesses and residents, who are on private septic systems, may have to adapt to a new servicing schedule with the proposed Policy. Likewise, some haulers may also have to adjust their disposal activities and routines. However, the Policy does have provisions in place to address emergencies that would require after hours discharges at the Facilities.

At the initial implementation of the proposed Hauled Wastewater Program Policy, there will be a change in the access of services and fees. The two year disposal fees phase in approach will help ease the transition of the proposed Policy.

7. CONCLUSION

York Region has a large number of private septic systems, which require regular maintenance and servicing. The Region recognizes that there is a need of providing services to receive hauled wastewater. As a result, the Hauled Wastewater Program was established to provide such services. Issues with the current program and its practices warrant an implementation of a new policy to protect the Region's infrastructure, and mitigate risks of environmental pollution and to health and safety.

Implementation of the Policy will also help to ensure full cost recovery associated with providing this service. Also, the Policy will help to achieve a sustainable Hauled

Wastewater Program that would maintain a quality service to the septic system owners in the Region and would be fair to all taxpayers.

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

The Senior Management Group has reviewed this report.

Recommended by:

Approved for Submission:

Erin Mahoney, M. Eng.
Commissioner of Environmental Services

Bruce Macgregor
Chief Administrative Officer

October 31, 2011

Attachment(s) 3

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