Agenda - Executive Policy Committee - November 29, 2006

Report - Standing Policy Committee on Infrastructure Renewal and Public Works - November 21, 2006

Item No. 4 2007 Fees for Hauled Wastewater - Sewer By-law No. 7070/97 File W

STANDING COMMITTEE RECOMMENDATION:

On November 21, 2006, the Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the administrative recommendation and submits the following to Council:

1. That effective July 1, 2007, the disposal fee for normal strength and overstrength hauled wastewater be increased from $1.00 per kilolitre to $2.51 per kilolitre

2. That effective July 1, 2007, Section 50 of Sewer By-law No. 7070/97 be amended to include the following threshold limits to characterize overstrength hauled wastewater:

   A. A biochemical oxygen demand greater than 2400 milligrams per litre
   B. A total suspended solids concentration greater than 5500 milligrams per litre

3. That the City Solicitor/Manager of Legal Services be requested to prepare the necessary by-law in accordance with the foregoing and submit same directly to Council by December 6, 2006.

4. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

Agenda - Executive Policy Committee - November 29, 2006

Report - Standing Policy Committee on Infrastructure Renewal and Public Works - November 21, 2006

DECISION MAKING HISTORY:

STANDING COMMITTEE RECOMMENDATION:

On November 21, 2006, the Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the administrative recommendation and submitted the matter to the Executive Policy Committee and Council.

RE: 2007 FEES FOR HAULED WASTEWATER

FOR SUBMISSION TO: Standing Policy Committee on Infrastructure Renewal and Public Works

ORIGINAL REPORT SIGNED BY: B.D. MacBride, P.Eng.
Director of Water and Waste Department

REPORT DATE: November 8, 2006

RECOMMENDATION:

It is recommended that:

1. Effective July 1, 2007, the disposal fee for normal strength and overstrength hauled wastewater be increased from $1.00 per kilolitre to $2.51 per kilolitre
2. Effective July 1, 2007, Section 50 of Sewer By-law 7070/97 be amended to include the following threshold limits to characterize overstrength hauled wastewater:
   - A biochemical oxygen demand greater than 2400 milligrams per litre
   - A total suspended solids concentration greater than 5500 milligrams per litre
3. The City Solicitor be instructed to prepare applicable changes to the Sewer By-law for Council approval by December 31, 2006.

Report Summary

Key Issues:

- The current charge for hauled wastewater, both normal strength and overstrength is $1.00 per kilolitre. This charge represents a cost recovery of about 40% of the actual cost of treating normal strength hauled wastewater based on the median data results.
- The recommended rate increase is necessary to more fully recover the cost of treating hauled wastewater. Winnipeg residents paying a water/sewer bill are currently subsidizing the majority of the cost of treating hauled wastewater.

Implications of the Recommendation(s):

General Implications

( ) None

( ) For the organization overall and/or for other departments

(**X**) For the community and/or organizations external to the City

( ) Involves a multi-year contract

Comment(s): Rate increases will impact the wastewater hauling industry, and customers that use the hauling services, as outlined in this report.

Policy Implications

( ) No

(**X**) Yes

Comment(s): Rate structures are a matter of policy.

Regulatory Implications

( ) None

( ) Eliminates or reduces regulatory impact

(**X**) Proposes regulatory impact

Comment(s): Sewer By-law 7070/97 will be amended to reflect the recommendations contained in this report. The impact of the changes will be additional costs to some users as outlined in the financial impact section.

Environmental Implications

(**X**) No

( ) Yes

Comment(s):

Human Resources Implications

(**X**) No

( ) Yes

Comment(s):

Financial Implications

(**X**) Within approved current and/or capital budget

( ) Current and/or capital budget adjustment required

Comment(s):

Report

REASON FOR THE REPORT:

By-law amendments including changes to the Sewage Disposal Fee require Council approval.

DISCUSSION

The current hauled wastewater charge:

- is $1.00 per kilolitre discharged regardless of the strength
- does not incorporate the overstrength surcharge outlined in the Overstrength Surcharge Program and in the Sewer By-law
- only recovers about 40% of the actual cost of treatment (Winnipeg water/sewer rate payers are currently subsidizing the majority of the cost of treating hauled wastewater)
- is based on 80% of the vehicle tank capacity
- has not increased since 2000
- is one of the lowest of Canadian municipalities surveyed (see Appendix A for a comparison of hauled wastewater rates of some other Canadian cities)

Hauled wastewater is:

- a term for hauled sewage
- all matter (liquid and solid) that is pumped out of septic tanks, holding tanks and tanks from commercial/industrial properties
- raw and untreated
- more concentrated than regular sewered wastewater (the more concentrated it is, the more expensive it is to treat)
- more taxing on the treatment processes than regular sewered wastewater

Hauled wastewater comes from:

- properties, primarily residential, within the city but not serviced by the sanitary sewer system (e.g., properties south of Wilkes)
- properties outside of the city (e.g., RM of Headingley)
- businesses and industries not connected to the City's sanitary sewer system
- businesses and industries connected to the City's sanitary sewer system that also have pump out tanks containing wastewater from their business processes
- portable toilets

Haulers must obtain an annual licence from the Water and Waste Department to use the City's hauled wastewater disposal facilities, which are located at each of the

wastewater treatment plants. In 2006 the Department licensed 73 wastewater hauling vehicles from 38 vehicle owners.[1]

From 1998 to 2006, the Department sampled 373 loads of hauled wastewater and determined the sewage strength by measuring the total suspended solids (TSS) and the biochemical oxygen demand (BOD). The results are shown in Table 1.

Table 1 - Hauled Wastewater Sampling Results

	TSS (milligrams per litre)	BOD (milligrams per litre)
Average	7401	2371
Median *	1370	673

**The median is the middle value, which best represents the typical wastewater strength*

The average is much higher because of the extremes of a small number of overstrength wastewater loads. The $2.51 charge recommended in this report is based on the lower median value since it better represents the majority of customers.

A surcharge is recommended to deal with the overstrength customers. This separates the customers into two categories.

1. Normal strength
   - usually residential or domestic and some commercial/industrial
   - can be 2 to 4 times more concentrated than regular sewered wastewater (based on the median values of actual data from the hauled wastewater sampling program)
2. Overstrength (exceeds oxygen demand and/or solids limits of normal strength hauled wastewater):
   - usually from commercial/industrial properties
   - can be 70 to 340 times more concentrated than regular sewered wastewater (based on actual data from the hauled wastewater sampling program)

The 2007 cost is $2.51 per kilolitre to treat normal strength hauled wastewater (based on median values from hauler data). The cost to treat overstrength hauled wastewater is calculated based on its strength.

Another change recommended is to charge based on a full load rather than 80% of a full load as previously was practiced. In the absence of a scale system or flow measuring system, charging on a full load basis is reasonable.

Recommended Charges

[1] Private recreational vehicles are exempt from a licence requirement and fees but may only discharge at locations designated by the utility.

1. The disposal fee for both normal and overstrength hauled wastewater:
   - is increased to $2.51 per kilolitre
   - is effective July 1, 2007
   - is based on 100% of tank capacity
   - is billed to the hauler

2. The additional fee for overstrength hauled wastewater will be applied as outlined in the Sewer By-law and:
   - is effective July 1, 2007
   - is based on volume of hauled wastewater
   - is per kilolitre based on a biochemical oxygen demand greater than 2400 mg/L and/or a concentration of total suspended solids greater than 5500 mg/L (based on the 75 percentile values from hauler data)
   - is billed to the commercial/industrial customer

The Department developed a tracking system in 2005 to record waste hauler information. We can now determine the loads that should have a surcharge applied and charge the customers accordingly. We have also been sampling from representative loads to determine wastewater strength for the development of the billing rate information. We will continue to conduct this sampling and will base future rate recommendations on the data obtained from the surveys.

Effective July 1, 2007, we will require the commercial/industrial hauled wastewater customers to provide a certificate of analysis from an accredited laboratory. The certificate will characterize the wastewater as either normal strength hauled wastewater or overstrength hauled wastewater. We will use the BOD and TSS results from the certificate to determine the billing calculations for overstrength loads.

The commercial/industrial customers that generate overstrength hauled wastewater will be required to have an Overstrength Wastewater Discharge Licence from the Water and Waste Department in accordance with the Sewer By-law.

Impact of Charges

Wastewater haulers charge property owners a fee to pump out a tank. The fee includes the pump-out service and the per kilolitre disposal fee the haulers pay to the City. Haulers will likely pass on any increase in the per kilolitre disposal fee to their customers.

<u>All hauled wastewater</u>

Wastewater haulers will be billed a base fee of $2.51 per kilolitre for all wastewater loads. Table 2 shows the estimated financial impact of the new rate and the estimated per load pump-out fee to be charged by the wastewater hauler to domestic customers after the new rate is introduced.

Table 2: IMPACT ON PRIVATE WASTEWATER HAULERS AND TYPICAL HOMEOWNER WITH A 6,800 LITRE HOLDING TANK

Year	Base Fee (All hauled wastewater)		Estimated Service Fee Charged to Homeowner by Hauler	Estimated Total Cost to Homeowner [3]
	$/KL	**Cost to Hauler ($)**		
2006	$1.00	$5.44 [1]	$50.00	$55.44
2007	$2.51	$17.07[2]	$50.00	$67.07
$ Increase	$1.51	$11.63	$0	$11.63
% Increase	151 %	214%	0%	21%

Notes:

1. Amount charged to the wastewater hauler based on 80% of vehicle's tank capacity.
2. Amount charged to the wastewater hauler based on 100% of vehicle's tank capacity
3. Assuming average of $50 basic charge to customer plus per KL cost.

Overstrength hauled wastewater

Commercial/industrial customers will be charged by the wastewater haulers directly for all loads, using the base fee, as noted in Table 2. If the wastewater is overstrength, as defined by the Sewer By-law, an overstrength surcharge will be billed directly by the City to the customer, as is done under the Overstrength Wastewater Surcharge Program for sewered customers.

An estimate of the wastewater charges for hauled overstrength wastewater for five typical commercial/industrial customers is shown in Table 3.

Flat rates may be charged for certain industries such as restaurants.

Table 3: TYPICAL CHARGES FOR OVERSTRENGTH HAULED WASTEWATER

Company Type	Typical Hauler Volume (L)	TSS (mg/L)[1]	BOD (mg/L)[1]	2007 Overstrength Surcharge Rate Billed to Customer ($)[2,3]	
				Average $ per KL	**$ per Load**
Rendering Plant	10,600	258	2,412	$0.01	$0.14
Milk Plant	10,600	455	4,812	$2.70	$28.64
Hog Plant	10,600	5,519	2,786	$0.45	$4.73
Municipal Sludge	10,600	28,476	11,865	$27.37	$290.16
Pork Processing	10,600	112,300	87,300	$173.05	$1,834.35

Notes:

1. Based on data obtained from the 2006 overstrength surcharge program.
2. Based on 2007 overstrength surcharge rates, $0.73/Kg TSS and $1.12/Kg BOD.
3. Based on overstrength hauled wastewater with a TSS>5,500 mg/L and/or BOD>2,400 mg/L

Impact on Revenues

Current revenue from this sector is about $120,000 annually. This will increase to approximately $400,000 per year under the higher rate although there may be a price impact that would reduce the net amount.

Similarly, based on some sampling to date, the surcharge of overstrength hauled wastewater could theoretically result in revenue of $900,000 per year. Again, there may be a significant price impact such that industries would find alternatives such as on site treatment that would reduce the net revenue to the utility considerably.

Overall, since the utility's costs are not increasing with this revenue, the impact of these new revenues would be to reduce needs from the sewer rate by an equivalent amount. This would serve to reduce future sewer rate increases associated with the wastewater improvements required by the Province. This is a revenue shift rather than a revenue increase.

COMMUNICATION STRATEGY:

The Water and Waste Department will communicate with customers as follows:

Strategy	Timeline
Notice to all wastewater haulers and overstrength hauled wastewater customers to advise them of the: • charges • change in process • information session	After the rates are approved
Information Session - presentation to explain the reason for the rate increase, the new process for overstrength customers, and steps customers can take to reduce their costs	About two weeks after the notice is issued
Notice mailed to all wastewater haulers and overstrength hauled wastewater customers confirming the messages in the information session	Week following the information session
Individual meetings with wastewater haulers and overstrength customers on request	Upon request - starting after the information session
Reminder notices provided to all overstrength wastewater customers and wastewater haulers	Prior to July 1, 2007

FINANCIAL IMPACT:

There is no financial impact associated with the recommendations in this report.

The utility's operating costs and total revenue will not change. The increase in revenue from the change in the hauler rate (normal and overstrength charges to a maximum of $1.2 million) will be offset by a decrease in the revenue earned from the sewer rate charged to all customers.

"Original signed by L. Fisher, C.A."

Laurie Fisher, CA
Acting Manager of Finance & Administration

IN PREPARING THIS REPORT THERE WAS:

Internal Consultation With and Concurrence By:

Legal Services Division, Corporate Services Department

External Consultation With:

There was no specific consultation with wastewater haulers on this report. However, they are aware that the rate is under review as follows.

At meetings held August 15 and 16, 2005 respecting the implementation of the hauler manifest system, the wastewater haulers were advised that the current rate was being reviewed and would likely be revised.

In addition, at the Annual Customer Seminar held December 7, 2005, the large commercial and industrial customers were advised that the wastewater hauler rate was under review and that an overstrength surcharge would likely be imposed.

THIS REPORT SUBMITTED BY:

Environmental Standards Division
Water and Waste Department

Prepared by: S. F. Fletcher
R.D. Ross
K.J.T. Kjartanson, P.Eng.

File No.: WW/040-17-08-19-00

APPENDIX A

Comparison of Hauled Wastewater Rates in Canada

COMMUNITY	DISPOSAL RATE	ADDITIONAL FEES	NO. OF LOADS PER YEAR	VOLUME PER YEAR (KL)
Winnipeg	$1.00/KL	Not applicable	16,244	148,466
Brandon[1]	$0.91/KL	n/a	1,300	3,500
Calgary	$4.32/KL	$10.15 monthly admin	n/a	n/a
Portage la Prairie[1]	$0.91/KL	n/a	1,300	n/a
Selkirk	$2.44/KL	n/a	n/a	n/a
Regina[2]	$0.22/KL	n/a	n/a	n/a
Saskatoon	$6.59/KL	n/a	3,800	21,229
Edmonton[3]	$1.10 -$2.20/KL	n/a	12,090	192,533
Toronto	$27.86/KL	n/a	n/a	n/a
Ottawa	$6.64/KL	$13.28/KL (communities outside of Ottawa)	n/a	n/a

Survey completed in May 2006 by the Water and Waste Department.

1 - $10.00 per load charged; assumes 11 KL per load

2 - flat annual fee of $24/year/500 L; assumes 216 loads per year and 11 KL per load

3 - $12.15 or $24.30 per axle charged depending on solids; assumes 2 axles per truck and 11 KL per load

n/a – not available.