

## MEMORANDUM

TO: Nathan Poore  
FROM: Randy Davis  
DATE: February 12, 2008  
RE: Pay-per-bag program loss explanation

Per Finance Committee request, I have developed an analysis to explain the current year loss in the Pay-per-bag program. The analysis compiles data from the last 3 fiscal years as well as annualizing the first six months of the current fiscal year. I have used all the fiscal years since the last price change, which occurred in July, 2004.

The analysis shows actual data for annual waste disposal, annual processed recycling, and annual number of bags sold to the public. The analysis also calculates waste and recycling as a percentage of the total waste stream; average weight per bag; annual bag revenue; and average number of bags sold per ton.

We found mostly positive information about our solid waste and recycling programs. Most of the data indicates a strong and successful program. A few of our findings include:

- The annualized total amount of waste generated in FY08 is 14% lower than the amount generated in FY05.
- The annualized total amount of recycling has increased by 48% since FY05.
- The average weight per bag is 22% higher in FY08 when compared to FY05. This corresponds with the 22% decrease in the average number of bags used for each ton of waste (during the same time period). This shows that the Town was selling fewer bags to discard the same amount of waste.
- The distribution between 33 and 20 gallon bags has remained relatively constant which means that the weighted average revenue per bag has also remained relatively constant.

With the above conclusions, we can develop logical theories as to why the current fee structure is no longer working. The current bag price was working fine through FY06. In FY07 the average weight per bag increased and we started to show losses in the program.

The unanticipated increase in the weight per bag has decreased bag sales and therefore decreased revenue, which is the major portion of the Pay-per-bag program loss given that expenses have stayed the same or increased. The Ecomaine Capital Assessment increases have also contributed to a failure in the fee structure. The assessment has increased by nearly \$10,000 in each of the last two years.

Data	FY05	FY06	FY07	FY08
Tons of Waste - Bags	2,395.05	2,359.96	2,664.13	2,578.34
Tons of Waste - Transfer Station	610.42	573.13	75.66	-
Tons of Waste - Total	3,005.47	2,933.09	2,739.79	2,578.34
Percent increase/(decrease) in Tons of Waste - Bags since FY05		-1.5%	11.2%	7.7%
Percent decrease in Tons of Waste since FY05		-2.4%	-8.8%	-14.2%
Tons of Recycling - Curbside	-	-	-	663.74
Tons of Recycling - Other	1,355.96	1,580.96	1,473.18	1,346.28
Tons of Recycling - Total	1,355.96	1,580.96	1,473.18	2,010.02
Percent increase in Tons of Recycling since FY05		16.6%	8.6%	48.2%
Tons of Waste and Recycling	4,361.43	4,514.05	4,212.97	4,588.36
Waste Percentage	69%	65%	65%	56%
Recycling Percentage	31%	35%	35%	44%
Average Cases Sold per Month	89.4	93.4	88.4	79.0
Bags per case	270	270	270	270
Number of Months	12	12	12	12
Total Bags Sold	289,656	302,616	286,416	255,960
Percent increase/(decrease) in Total Bags Sold since FY05		4.5%	-1.1%	-11.6%
Average Pounds per Bag *	16.54	15.60	18.60	20.15
Percent increase/(decrease) in Average Pounds per Bag since FY05		-5.7%	12.5%	21.8%
Percent 33-gallon bags to Total	60%	64%	66%	65%
Percent 20-gallon bags to Total	40%	36%	34%	35%
Bag Revenue	382,725	404,644	385,447	343,846
Weighted Average Revenue per Bag **	1.32	1.34	1.35	1.34
Average Bags Sold per Ton ***	120.94	128.23	107.51	99.27

#### Lost Revenue due to heavier bags calculation

Average Bags Sold per Ton in FY05	120.94	120.94
Less: Average Bags Sold per Ton in selected year	(107.51)	(99.27)
	13.43	21.67
Times Weighted Average Revenue per Bag	1.35	1.34
	18.08	29.11
Times Tons of Waste - Bags	2,664.13	2,578.34
Lost Revenue	48,156.49	75,045.96

Note \* Calculated by multiplying the Tons of Waste - Bags by 2,000 and then dividing that number by the total bags sold.

Note \*\* Calculated by dividing the Bag Revenue by the Total Bags Sold.

Note \*\*\* Calculated by dividing the Total Bags Sold by the Tons of Waste - Bags.

**Date of last price change was July 2004.**