



TOWN OF WELFLEET

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To: Board of Selectmen, Board of Health
From: Harry Sarkis Terkanian, Town Administrator
Subject: Nine Month Review of Save Money and Reduce Trash ("SMART")
Date: October, 21, 2014, revised October 28, 2014

Executive Summary - The first nine months of program operation continue to show the significant reductions in the amount of solid waste processed and in the increase in the amount of recyclable materials processed. During the first nine months 19,800 five bag packages of SMART bags were delivered to retailers. The Town also purchased 680 packages which were used during transition to the program as well as for distribution to persons qualifying for assistance and to ease retailer shortages. Town receipts for bag sales for the period, net of bag manufacturing and processing costs, totaled \$78,700.

Part of the program included reducing the price of residential transfer station permits from \$55 to \$40 in fiscal 2014 and then from \$40 to \$25 for fiscal 2015. The result of the permit fee decrease was to reduce residential permit costs in for FY 2014 from the FY 2013 total by \$33,085 and in 2015 from the FY 2013 total by \$68,455. As the number of residential permits has remained essentially constant, this reduction in permit charges to residents is entirely due to the fee reductions.

Large commercial vehicle permits decreased from 9 in FY 2014 to 3 in FY 2015 indicating that some commercial haulers may be delivering trash elsewhere.

The amount of municipal solid waste handled through the transfer station decreased by 536.38 tons, representing a 36% decrease in tonnage. The amount of recyclable materials handled through the transfer station increased by 166.26 tons, representing a 52% increase.

Transfer station operating costs decreased by an estimated \$24,405.29 due to the reduced amount of municipal solid waste. This cost savings was offset in large part by the cost of the bag program which was \$20,154.97 for the period (approximately 20.3 cents per bag.)

Background – Program Description

The SMART program (or Pay as You Throw – PAYT) requires that residential trash delivered to the transfer station be delivered in authorized bags. The bags are sold by several local retailers at their cost. Three bag sizes are available: large bags costing \$1.50 each with a 33 gallon capacity which hold about 25 pounds; small "tall kitchen" bags costing \$1.00 each with a 15 gallon capacity which hold about 15 pounds; and small "mini" bags costing \$0.50 each with an 8 gallon capacity which hold about 5 pounds¹.

¹ See the board of health regulations for rules governing commercial hauler and single bag fees.
http://www.wellfleet-ma.gov/sites/wellfleetma/files/file/file/boh_regs_2014_2014-05-06_1.pdf

Background – Statutory Basis

See the March 13, 2014 three month comparison report.²

Background – Transfer Station Fees

Resident transfer station stickers for the primary vehicle were reduced from \$55 annually to \$40 annually effective on July 1, 2013. The program itself became effective for residential users on December 1, 2013 and for commercial haulers on January 1, 2014. On July 1, 2014 the fee for resident transfer station stickers for the primary vehicle was further reduced to \$25 annually.

Nine Month Data

Exhibit A is the raw transfer station data for the period December 1, 2013 through August 31, 2014 and, for comparison purposes, from the corresponding period one year earlier. Exhibit B is a chart showing the monthly average municipal solid waste (“MSW”) tonnage for the first nine months of the program as compared with the average for the corresponding nine months of the previous three years. Against the three year average a reduction in MSW is clearly apparent.

This is the first reporting period which includes the summer season. As with all months during the program, the July and August 2014 MSW tonnage is less than the corresponding three year pre program average. While the tonnage reductions are significant, they show a smaller percentage reduction than during the winter and spring months. Whether this represents a normal statistical variation, a lesser commitment to recycling by visitors as compared to residents or some other explanation is unclear. As we continue to accumulate data some clarity may emerge at a future date.

SMART Bag Sales. Bag deliveries to retailers for the first nine months of the program total 496 cases (99,200 bags – 19,800 five bag packages). 280 cases (56,000 bags) were delivered to retailers during the period June through August compared with only 216 cases (43,200 bags) delivered during the previous six months. This is consistent with our understanding of how Wellfleet’s population increases during the summer months. The breakdown of purchases by bag sizes is: large bags 229 cases; small “tall kitchen” bags 184 cases; and small “mini” bags 83 cases. Retail value of the bags delivered to retailers was \$114,100. The Town has also purchased 17 cases, some of which were used in December and January to ease the initial transition and smaller numbers for distribution to persons qualifying for assistance, for resale by the recycling committee and to ease retailer shortages this past August. Town receipts from bag sales through August, 2014 totaled \$78,700. See Exhibit C.

Transfer Station Permits Sold. There has been almost no change in the number of transfer station permits sold. In analyzing this data I have looked at the figures for the period from June through October for 2013 and 2014. After October sales drop off sharply. Between the beginning of November, 2013 and the end of May, 2014 17 residential first vehicle permits were sold, no additional second or third residential permits were sold and only one small vehicle commercial permit was sold. So I consider June through October to be representative of an entire 12 month period. In 2013 2,470 residential first vehicles permits were sold

² http://www.wellfleet-ma.gov/sites/wellfleetma/files/file/three_month_smart_analysis_dec_2013_to_feb_2014_-_2014-03-22.pdf

compared with 2,485 for the same period in 2014. This represents an increase in the number sold of less than 1%. Second residential sticker sales for 2013 were 799 and for 2014 were 844; showing an increase over the previous year. Third vehicle residential sticker sales in 2013 were zero. 29 were sold in 2014.

Revenue from residential stickers reflected the price decrease from \$40 to \$25. During 2013 first vehicle revenue was \$98,960 compared with 2014 revenue of \$62,125, a decrease of \$36,835. The net change in revenue considering all types of residential stickers was a decrease of \$35,370 in 2014 over 2013.

Small vehicle commercial permits sold in 2013 totaled 66 and in 2014 total 67 to date. The price of this type of sticker did not change so the net revenue increase for this type of sticker was \$65.

Large vehicle commercial permits decreased from 9 sold in 2013 to 3 sold in 2014 with a corresponding decrease in revenue of \$505.

Overall, revenue from transfer station permits decreased \$35,875 from 2013 to 2014. See Exhibit D.

Total MSW Handled. MSW processed through the transfer station includes residential and commercial refuse as well as refuse collected by the DPW from beaches and other locations. MSW decreased to 954.44 tons during December, 2013 through August, 2014 compared with 1,490.82 tons for the corresponding pre program period. This represents a reduction in MSW of 36%.

Recyclable Materials. Recyclable tonnage during December, 2013 through August 2014 totaled 482.98 tons compared with the same nine month pre program period recycled tonnage of 316.72 tons. This is a nine month increase of 52%. A clear effect of the program has been to increase the amount of material recycled.

Overall Transfer Station Tonnage. Even with the increase in recycling tonnage processed, the overall tonnage processed through the Transfer Station has been reduced. During the first three months there was a net decrease of 25.1%, 126.42 tons³. During the first six months the overall decrease was 24%, 134.49 tons. During nine month program period the overall decrease was 25%, 370.12 tons. Possible causes for the reduction in total tonnage could include: 1) commercial haulers deciding to dispose of trash at other locations such as the SEMASS transfer station at Yarmouth as evidenced by the drop in large commercial permits from 9 to 3; 2) increases in disposal at home through composting, etc.; 3) possibly other as yet unidentified reasons. This decrease is significant. For reference, the total tonnage delivered to SEMASS in 2012 from all sources (residential, commercial and municipal pickups) was about 1,900 tons.

Bag Sales Receipts. Revenue from bag sales is a “trailing” figure. This is because the bag vendor, WasteZero, invoices retailers on a net 45 days basis and then, after receipt of retailer payments, accounts to and remits to the Town. There can be a delay of 60 days or more

³ Other Massachusetts communities have seen similar reductions in trash tonnage and operating costs. Cohasset: 25% reduction, first year savings of \$100,000. Duxbury: 48% reduction and \$240,000 annual savings. Sandwich: 42% reduction and \$120,000 first year savings. Wrentham: 33% reduction. Attleboro 43% reduction. Dartmouth: 51% reduction. The latter three communities have curbside pickup. Plymouth: 42% reduction. Data from March 1, 2014 SMART Workshop slides.

between a bag shipment to a retailer and the corresponding receipt by the Town. For example, the January, 2014 receipts of \$2,377 principally relate to deliveries to retailers in November, 2013, and the February, 2014 receipts are principally attributable to deliveries in December, 2013. This accounts for about one-half of the difference between the value of bags shipped to retailers (\$114,100) and the funds received by the Town (\$78,700.) The remainder is the cost of manufacturing and shipping bags and handling invoicing collection and remittance of proceeds all of which is done by WasteZero under contract to the Town. For the 496 cases delivered the cost of WasteZero's services totaled \$20,154.97, about 20.3 cents per bag⁴.

Changes in the Cost of Handling Recyclable Materials. Another factor clouding the analysis is the fact that in December, 2013 the Town's recycling contractor imposed a \$40 per ton charge for providing containers and transporting recyclables. Theretofore they had provided this service without charge, relying on the revenue generated by processing and selling the recyclables picked up from Wellfleet. When the DPW is unable to locate a market for these materials they now have to haul them to facilities which will accept them with either a nominal or, in many cases, with no payment to the Town. The same change in charging has been experienced by other Cape towns. The DPW continues to explore other outlets for these materials. In some cases we are hauling plastic, glass and tin to recycling centers. We bear the cost of transportation.

With all of these caveats in mind, some conclusions can still be drawn:

- The change in the ratio of recyclables to trash and the reduction in trash volumes are consistent with those observed in other towns who have recently adopted SMART programs. SMART programs do increase recycling and do decrease MSW volumes.
- The reduction in the cost of a residential first vehicle transfer station sticker from \$55 to \$40 in fiscal 2014 resulted in a reduction in transfer station sticker fees paid by Wellfleet residents of \$33,085. A further reduction in cost to residents about \$35,370 was realized with the change in first vehicle residential permit fees from \$40 to \$25 in fiscal 2015 so the total reduction in FY 2015 fees compared with the pre program fees in FY 2013 is \$68,455. The total two year savings of \$101,640 in permit fees is partially offset by the added cost to residents to purchase program bags. Until we can do a year on year comparison for an entire fiscal year we will not know how close the program is to being revenue neutral for residents and for the Town.
- The 536.38 ton reduction in municipal solid waste going to SEMASS for the first nine months of the program resulted in a reduction in tipping fees of \$9,923.03 (at \$18.50 per ton.) The town also saved an estimated \$14,482.26 in transportation costs (estimated at \$27 per ton.) These two items total \$24,405.29.⁵

⁴ Cost per case for the WasteZero services are \$46.87 for large bags, \$37.05 for medium bags and \$31.38 for small bags. There are 200 bags in a case.

⁵ When the current MSW contract with Covanta expires tipping fees under the new contract with ABC Disposal will be \$55.00 per ton. The cost avoidance on the 536.38 ton reduction would then be a \$29,500.90 reduction in tipping fees and the same \$14,482.26 estimated savings in transportation costs (disregarding any future increase in personnel costs, fuel, etc.) for a total of \$43,983.16.

Comparison Recycling and Solid Waste Tonnage

Recycling		Plastic & Tin	Newspaper & Cardboard	Glass		
Dec '12	12/11	0.00	10.16	0.00		
	12/14	1.53	0.00	18.78		
					Month's Total	Running Total
	Totals	1.53	10.16	18.78	30.47	30.47
Jan '13	1/8	0.00	10.49	0.00		
	1/15	2.04	5.14	0.00		
					Month's Total	Running Total
	Totals	2.04	15.63	0.00	17.67	48.14
Feb '13	2/26	2.37	4.87	0.00		
					Month's Total	Running Total
	Totals	2.37	4.87	0.00	7.24	55.38
March '13	3/1	0.00	11.51	0.00		
	3/15	1.93	0.00	19.13		
					Month's Total	Running Total
	Totals	1.93	11.51	13.44	39.39	94.77
April '13	4/2	0.00	11.61	0.00		
	4/9	2.38	5.19	0.00		
	4/25	0.00	10.12	0.00	Month's Total	Running Total
	Totals	2.38	26.92	0.00	29.30	124.07
May '13	5/8	2.43	4.86	0.00		
	5/14	0.00	6.42	0.00		
	5/16	0.00	2.42	18.15		
	5/29	2.54	5.73	0.00	Month's Total	Running Total
	Totals	4.97	19.43	18.15	42.55	166.62
June '13	6/6	2.51	4.14	0.00		
	6/13	0.00	10.03	0.00		
	6/27	0.00	3.88	18.90	Month's Total	Running Total
	Totals	2.51	18.05	18.90	39.46	206.08
July '13	7/2	2.29	0.00	0.00		
	7/11	0.00	10.75	0.00		
	7/18	0.00	5.84	16.58		
	7/24	1.92	5.27	0.00	Month's Total	Running Total
	Totals	4.21	21.86	16.58	42.65	248.73
August '13	8/6	2.32	6.27	0.00		
	8/13	0.00	10.25	0.00		
	8/14	0.00	5.00	23.18		
	8/20	2.55	5.11	0.00		
	8/22	4.09	2.22	0.00		
	8/28	2.19	4.81	0.00	Month's Total	Running Total
	Totals	11.15	33.66	23.18	67.99	316.72

Recycling		Plastic & Tin	Newspaper & Cardboard	Glass		
Dec '13	12/13	4.36	0.00	0.00		
	12/17	0.00	12.36	0.00		
	12/31	0.00	12.99	0.00	Month's Total	Running Total
	Totals	4.36	25.35	0.00	42.70	42.70
Jan '14	1/10	0.00	4.01	18.76		
	1/21	1.45	5.19	0.00		
	1/31	2.72	5.22	0.00	Month's Total	Running Total
	Totals	4.17	14.42	18.76	37.35	80.05
Feb '14	2/7	2.40	3.08	0.00		
	2/19	1.73	4.50	0.00	Month's Total	Running Total
	Totals	4.13	7.58	0.00	11.71	91.76
March '14		0.00	16.52	20.09		
					Month's Total	Running Total
		0.00	16.52	20.09	36.61	128.37
April '14		6.40	17.12	0.00		
					Month's Total	Running Total
		6.40	17.12	23.52	47.04	175.41
May '14		2.86	30.23	16.67		
					Month's Total	Running Total
	Totals	2.86	30.23	16.67	49.76	225.17
June '14		9.93	38.11	7.00		
					Month's Total	Running Total
	Totals	9.93	38.11	7.00	55.04	280.21
July '14		11.72	48.56	48.71		
					Month's Total	Running Total
	Totals	11.72	48.56	48.71	108.99	389.20
August '14		8.72	50.18	34.88		
					Month's Total	Running Total
	Totals	8.72	50.18	34.88	93.78	482.98

Solid Waste	Date	Tonnage	
Dec '12	12/5	20.02	
	12/7	19.68	
	12/18	23.43	
	12/19	26.47	
	12/28	24.43	Running Total
	Total	114.03	114.03
Jan '13	1/31	21.23	Running Total
	Total	21.23	135.26
Feb '13	2/13	21.92	
	2/20	20.26	
	2/28	21.99	Running Total
	Total	64.17	199.43
March '13	3/5	18.32	
	3/15	18.08	
	3/21	20.33	
	3/27	19.36	Running Total
	Total	76.09	275.52
April '13	4/5	16.47	
	4/9	16.77	
	4/18	17.93	
	4/22	17.02	
	4/23	18.09	
	4/29	16.90	Running Total
	Total	103.18	378.70

Solid Waste	Date	Tonnage	
Dec '13	12/3	18.47	
	12/20	20.87	
	12/30	19.02	
			Running Total
	Total	58.36	58.36
Jan '14	1/14	22.83	Running Total
	Total	22.83	81.19
Feb '14	2/21	40.54	
	2/25	24.64	
			Running Total
	Total	65.18	146.37
March '14	3/11	18.26	
	4/2	18.86	
			Running Total
	Total	37.12	183.49
April '14	4/16	23.59	
	4/29	20.89	
			Running Total
	Total	44.48	227.97

May'13	5/3	14.70	
	5/8	17.70	
	5/13	18.30	
	5/15	19.28	
	5/23	18.58	
	5/28	22.09	
	5/29	23.89	Running Total
	Total	134.54	513.24
June'13	6/3	25.35	
	6/4	20.80	
	6/7	15.36	
	6/11	22.27	
	6/18	24.31	
	6/20	21.20	
	6/21	23.77	
	6/26	24.96	
	6/27	17.03	Running Total
	Total	195.05	708.29
July'13	7/1	44.81	
	7/3	20.67	
	7/5	25.61	
	7/8	45.97	
	7/10	21.38	
	7/12	28.93	
	7/16	52.96	
	7/19	20.91	
	7/22	21.33	
	7/23	20.13	
	7/26	26.41	
	7/29	48.20	Running Total
	Total	377.31	1085.60
Aug '13	8/2	25.71	
	8/5	27.56	
	8/6	28.31	
	8/7	29.14	
	8/9	30.27	
	8/12	25.80	
	8/13	21.62	
	8/15	24.96	
	8/19	50.76	
	8/22	45.35	
	8/26	24.61	
	8/28	20.70	
	8/29	24.53	
	8/31	25.90	Running Total
	Total	405.22	1490.82

May'14	5/2	21.50	
	5/13	17.75	
	5/21	20.48	
	5/28	21.50	
	Total	81.23	309.20
June'14	6/4	20.95	
	6/9	18.48	
	6/17	21.42	
	6/23	26.13	
	6/27	21.18	
	Total	108.16	417.36
July'14	7/1	20.75	
	7/8	30.03	
	7/8	26.14	
	7/11	26.64	
	7/15	30.13	
	7/17	31.38	
	7/21	31.73	
	7/25	29.89	
	7/28	26.41	
	Total	253.10	670.46
Aug '14	8/1	30.36	
	8/4	27.06	
	8/7	26.46	
	8/11	30.59	
	8/18	31.44	
	8/18	29.72	
	8/21	26.20	
	8/26	34.39	
	8/26	27.08	
	8/29	20.68	
	Total	283.98	954.44

Notes:

Recycling for 9 month period:

Dec'12- Aug'13 totaled 316.72 Tons Dec'13 - Aug'14 totaled 482.98 tons

A Recycling increase of 166.26 tons, since starting PAYT Dec'13

Solid Waste for 9 month period:

Our Solid Waste tonage Dec'12 - Aug'13 was 1490.82.

Our Solid Waste tonage for Dec'13 - May'14 was 954.44.

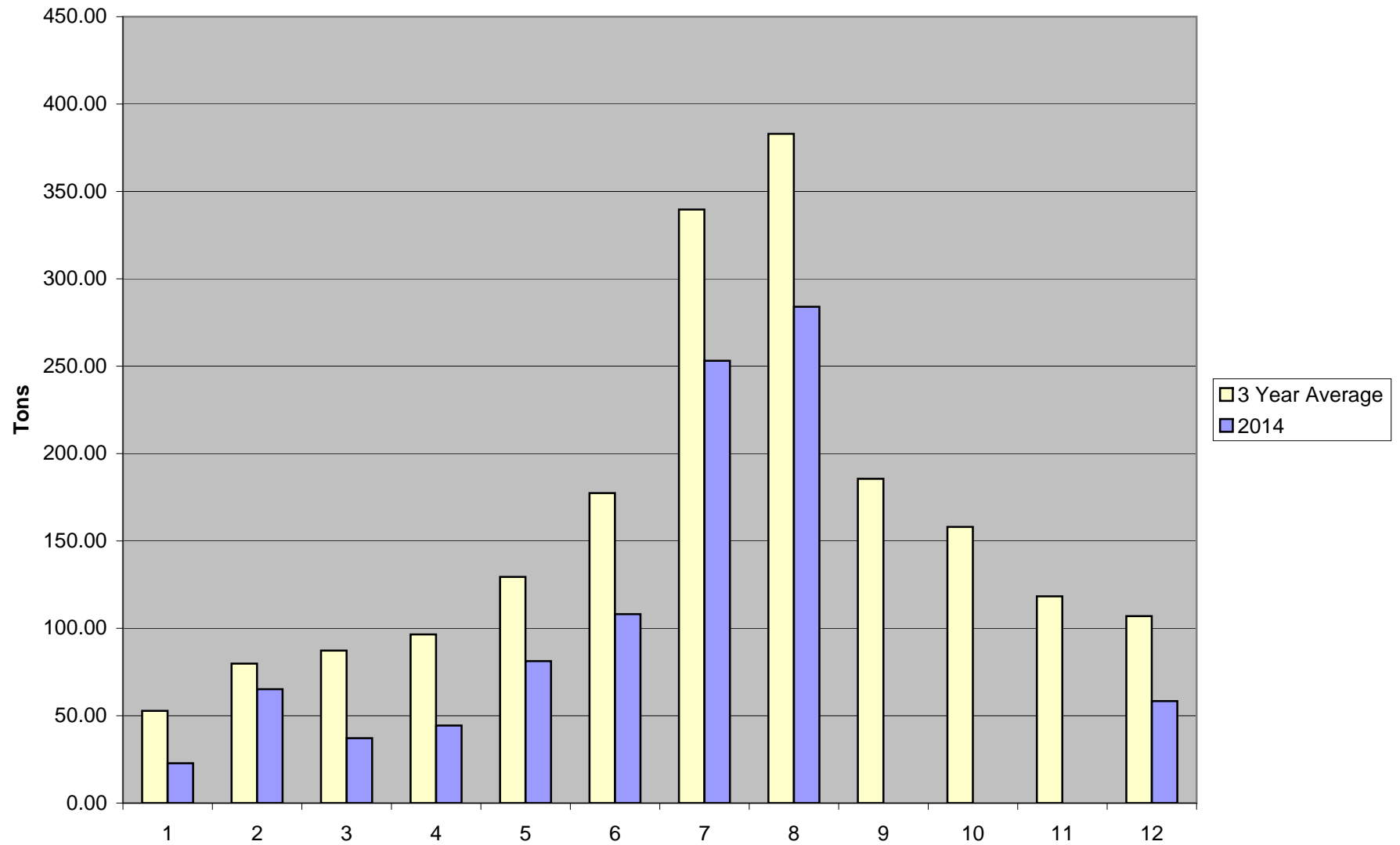
Our Solid Waste tonage has decreased by 536.38 tons, since starting PAYT Dec'13

Total Refuse entering the Transfer Station for 9 month period:

Dec'12- Aug'13 totaled 1807.54 Tons Dec'13 - Aug'14 totaled 1437.42 tons

A total decrease of 370.12 tons entering the Transfer Station

Tons of MSW by Month



Three Month Bag Sales Analysis

EXHIBIT C

Bag Sales by Month - November, 2013 through August 2014

Retailers=====					Town of Wellfleet===	
Month	Retailer Cases	Bags	Cost	Receipts	Cases	Cost
November	62	12,400	\$14,900	\$0	12	\$2,800
December	50	10,000	\$11,600	\$9,900	0	
January	27	5,400	\$6,200	\$13,900	0	
February	6	1,200	\$1,500	\$5,700	1	\$200
March	30	6,000	\$7,000	\$3,800	0	
April	41	8,200	\$9,100	\$6,500	0	
May	63	12,600	\$14,500	\$3,000	0	
June	104	20,800	\$22,700	\$11,300	4	\$900
July	31	6,200	\$7,600	\$16,700	0	
August	82	16,400	\$19,000	\$7,900	0	
Total	496	99,200	\$114,100	\$78,700	17	\$3,900

Bag Sales by Size - November 2013 through July 2014

Size	Cases	Bags	Cost	Fee/case	Extension
Small	83	16,600	\$8,300	\$31.38	\$2,604.54
Medium	184	36,800	\$36,800	\$37.05	\$6,817.20
Large	229	45,800	\$68,700	\$46.87	\$10,733.23
Total	496	99,200	\$113,800		\$20,154.97

Note: \$300 discrepancy cased by mis pricing some bags sold to one retailer in November, 2013

6/1/2013								
Total Sticker Sales	128	49	0	1592	450	0	33	4
Month	Resident 1st Vehicle \$40	Resident 2nd Vehicle \$10	Resident 3rd Vehicle \$35	1st Vehicle Combo TS Portion Only \$40	2nd Vehicle Combo TS Portion Only \$10	3rd Vehicle Combo TS Portion Only \$35	Commercial Vehicle cars, station wagons, trucks under 1 ton \$65	Commercial Trucks Over 1 ton \$95

Sticker Revenue	\$5,120.00	\$490.00	\$0.00	\$63,680.00	\$4,500.00	\$0.00	\$2,145.00	\$380.00
June 2013 Total Sticker Revenue	\$76,315.00							

