The New Dump Times

Volume 1, Number 4

Backhoe Update

INSIDE THIS ISSUE:

We figured that the taxpayers of Ogunquit, having purchased a new CAT extended hoe backhoe in 2013, might be interested in how well it is performing its duties at the Transfer Station. The short answer is very well, but to illustrate the difference we have included some figures and an explanation to help understand how they are plugged into the charts.

In preparing this report I needed to consider carefully how best to show the efficiency of the CAT Backhoe compared to the smaller John Deere tractor. This savings (the result of less containers being hauled of greater weight) is complicated by a number of factors that affect the weights and the timing of the hauls and for this reason you see two "Total Differences" on the chart below.....*Continued on Page 4*

	A	B	C	D		E	F	G
	Total# of Boxes	Total Tonnage	Average Weight Per Box	Total # of Boxes X $198.50 (current hauling fee)		Avg Total Tonnage ALL Boxes Over Period	# Hauls Per Avg Total Tonnage All Boxes	Cost = # Hauls Per Avg Total Tonnage X $198.50 (current fee)
Single Sort	42	137.10	3.26	$8,337.00			38.62	$7,666.91
	26	114.73	4.41	$5,161.00			29.46	$5,847.81
		251.83	-1.15	$3,176.00		125.92		$1,819.10
Construction	62	366.89	5.91	$12,307.00			56.17	$11,149.08
	40	297.00	7.43	$7,940.00			44.68	$8,868.38
		663.89	-1.52	$4,367.00		331.95		$2,280.70
Wood	22	103.16	4.68	$4,367.00			19.79	$3,930.13
	12	82.16	6.85	$2,382.00			13.53	$2,683.72
		185.32	-2.17	$1,985.00		92.66		$1,246.41
Metal	16	73.96	4.62	$3,176.00			14.42	$2,861.49
	8	59.24	7.41	$1,588.00			8.33	$1,652.51
		133.20	-2.79	$1,588.00		66.6		$1,208.98
Cardboard	63	198.24	3.15	$12,505.50			57.43	$11,399.86
	30	163.55	5.45	$5,955.00			33.19	$6,588.74
		361.79	-2.30	$6,550.50		180.9		$4,811.12
Mixed Paper	18	205.47	11.42	$3,573.00			14.68	$2,913.98
	13	129.72	10.34	$2,580.50			16.21	$3,217.69
		335.19	1.08	$992.50		167.6		($303.71)
		TOTAL DIFFERENCE		$18,658.50		TOTAL DIFFERENCE		$11,241.74

Graph showing 40-yard Roll-off Boxes hauled, by number and average weight, before (pink shade) and after (green shade) the arrival of the Caterpillar Backhoe as well as the cost difference (red).

On pages 2 of this issue you will find a chart breaking down the number of boxes sent out and the average weight of those boxes sent out between October 2012 and September 2014.

NOTICES

We will be open over the Memorial Day, Fourth of July and Labor Day Holidays.

Regular Hours:

7:00AM—2:00PM

A Reminder

The size of the **FREE BAG is 33 GALLONS** or the equivalent amount of Small bags.

Any amount over 33 gallons will be charge $1.00.

	Comigled Containers			Const & Bulky			Wood			Metal			Cardboard			Mixed Paper		
	# Boxes	Tot. Tons	Avg. Tons	# Boxes	Tot. Tons	Avg. Tons	# Boxes	Tot. Tons	Avg. Tons	# Boxes	Tot. Tons	Avg. Tons	# Boxes	Tot. Tons	Avg. Tons	# Boxes	Tot. Tons	Avg. Tons
October-12	3	10.28	3.42	3	17.84	5.94	1	5.45	5.45	1	5.43	5.43	2	9.07	4.54	1	10.42	10.42
October-13	2	8.54	4.27	3	18.74	6.24	1	6.3	6.3	0	0	0	2	12.72	6.36	1	14.93	14.93
October-14	2	6.41	3.2	4	30.68	7.67	1	7.71	7.71	1	7.14	7.14	2	13.2	6.6	1	13.61	13.61
November-12	1	2.9	2.9	1	4.46	4.46	1	4.43	4.43	1	3.73	3.73	1	3.7	3.7	1	11.78	11.78
November-13	1	3.97	3.97	1	10.21	10.21	1	6.28	6.28	1	7.31	7.31	1	4.1	4.1	0	0	0
November-14	1	3.47	3.47	2	12.23	6.12	0	0	0	1	5.9	5.9	0	0	0	1	12.62	12.62
December-12	2	6.89	3.45	3	16.23	5.41	1	4.55	4.55	0	0	0	1	3.3	3.3	0	0	0
December-13	2	10.43	5.22	1	4.48	4.48	0	0	0	0	0	0	1	4.52	4.52	1	7.25	7.25
December-14	1	4.11	4.11	2	12.33	6.17	1	6.53	6.53	0	0	0	2	12.44	6.22	0	0	0
January-12	1	4.1	4.1	4	11.96	2.99	1	5.15	5.15	0	0	0	1	4.34	4.34	1	10.22	10.22
January-13	1	3.87	3.87	2	14.07	7.03	1	3.87	3.87	1	6.53	6.53	3	4.42	1.47	1	8.09	8.09
January-14	0	0	0	0	0	0	1	7.67	7.67	0	0	0	2	13.9	6.95	2	22.25	11.28
January-15	2	8.59	4.3	2	14.77	7.38	0	0	0	0	0	0	0	0	0	1	5.59	5.59
February-12	1	3.83	3.83	3	25.7	8.57	1	4.72	4.72	0	0	0	1	1.36	1.36	0	0	0
February-13	1	1.56	1.56	1	11.57	11.57	0	0	0	0	0	0	2	10.69	3.56	0	0	0
February-14	1	7.49	7.49	1	8.99	8.99	1	7.98	7.98	0	0	0	0	0	0	0	0	0
February-15	2	9.98	4.99	1	7.81	7.81	0	0	0	0	0	0	1	5.2	7.7	3	14.86	4.95
March-12	1	3.51	3.51	2	9.21	4.6	1	5.52	5.52	1	5.89	5.89	2	7.26	3.63	1	12.75	12.75
March-13	1	5.84	5.84	3	18.29	6.09	1	6.56	6.56	0	0	0	1	3.12	3.12	3	35.05	11.68
March-14	1	6.3	6.3	2	19.79	9.9	0	0	0	0	0	0	2	14.66	7.33	0	0	0
March-15	0	0	0	2	16.45	8.23	1	7.13	7.13	1	7.7	7.7	2	8.84	4.42	0	0	0
April-12	1	3.16	3.16	4	27.28	6.82	1	3.53	3.53	0	0	0	3	6.12	2.04	0	0	0
April-13	2	7.54	3.77	6	40.18	6.7	1	5.23	5.23	1	5.79	5.79	1	3.76	3.76	0	0	0
April-14	1	4.5	4.5	3	25.29	8.43	1	5.78	5.78	1	8.73	8.73	1	5.72	5.72	1	11.19	11.19
May-12	2	7.08	3.54	4	22.68	5.67	2	11.18	5.59	1	6.04	6.04	5	15.4	3.08	1	12.84	12.84
May-13	2	5.99	3	4	26.71	6.68	2	9.88	4.94	1	6.19	6.19	5	18.3	3.66	0	0	0
May-14	2	9.34	4.67	5	39.6	7.92	1	5.94	5.94	0	0	0	4	17.76	4.44	0	0	0
June-12	2	6.8	3.4	3	17.93	5.98	0	0	0	2	6.44	3.22	3	11.34	3.78	1	17	17
June-13	2	6.39	3.2	3	20.35	6.78	3	8.11	2.7	0	0	0	3	12.51	4.17	3	31.62	10.54
June-14	1	4.49	4.49	5	41.43	8.29	1	7.58	7.58	1	7.61	7.61	2	11.84	5.92	1	16.57	16.57
July-12	4	11.28	2.82	5	22.1	4.42	2	9.62	4.81	1	2.99	2.99	8	16.48	2.06	1	8.18	8.18
July-13	4	11.85	2.96	4	21.04	5.26	1	5.79	5.79	1	5.87	5.87	6	20.22	3.37	2	25.62	12.81
July-14	4	15.97	3.99	3	24.08	8.03	1	7.02	7.02	1	7.75	7.75	4	23.56	5.89	1	14.16	14.16
August-12	4	12.56	3.14	2	12.86	6.43	0	0	0	1	4.24	4.24	5	16.85	3.37	2	21.9	10.95
August-13	5	14.95	2.99	2	8.34	4.17	1	4.12	4.12	2	4.68	2.34	7	20.76	2.97	0	0	0
August-14	3	11.99	4	3	21.21	7.07	1	6.27	6.27	0	0	0	3	16.68	5.56	1	11.62	11.62
September-12	2	6.72	3.36	3	18.09	6.03	1	5.45	5.45	2	10.14	5.07	3	9.24	3.08	0	0	0
September-13	1	3.04	3.04	2	10.22	5.11	1	6.14	6.14	1	7.1	7.1	1	7.29	7.29	1	14.71	14.71
September-14	2	7.69	3.85	1	7.65	7.65	1	6.27	6.27	0	0	0	3	11.13	3.71	0	0	0

Legend:

Pre Backhoe
Transition period
New Backhoe
Lowest average weights for month
Highest average weights for month
Box weights with significant snow or ice recorded

Numbers
As of January 2015

Hauling Fee: $198.50 per haul

Tipping Fees:
MSW:
$62.50/ton
Construction:
$62.50/ton
Wood:
$50.00/ton

Recycle Product Prices
Metal:
$80.00/ton
Cardboard:
$35.00/ton
Paper:
$00.00/ton
Co-mingled:
$00.00/ton

OUT OF ECOMAINE UPDATE

After almost twenty years, we are officially out of our membership relationship with ECOMaine and though we felt it was not a good fit for us here, we applaud their recycling efforts and attempts to spread the word.

So far we have seen no negative impact from this move. We are paying $16.50 a ton less for our Municipal Solid Waste (MSW) than we were at the tie of the last issue this newsletter in 2014.

Our yearly tonnage of MSW was down but it is still by far the largest quantity of any single material we send out so that has a large impact on our budget.

The other material sent to our ECOMaine by contract was our co-mingled bottles and cans. We now send them to Pine Tree Waste for no charge and wait for the markets to improve so we might receive revenue from that material. The price of Metal and Cardboard are down and at the moment we are not receiving anything for Mixed Paper (we were getting $35.00 per ton).

Though the markets for all recyclable materials are low at this time, we still are able to make enough revenue to help offset costs.

We are considering a move to Single Sort (Mixing Co-mingled Containers with Mixed Paper) to make it easier for our customers to recycle and see if that impacts our recycling rate.

Oceanside Waste is now our broker for these materials as well as our hauler and we are happy with their cooperation in directing our materials to their various destinations.

So, even though being on our own will present challenges and we can not predict the future , we feel we are well situated to adapt the changing world of waste.

Thank you to all who recycle, for helping us, yourselves and your neighbors.

John Fusco
Transfer Station

BACKHOE UPDATE *(continued from page 4)*

Here is an example of the formula worked out for the comparison of the Old and New backhoes using Co-mingle Containers using the figures from the chart on page 1:

Column B, Old Backhoe: **137.1 ton** ÷ Column A, Old Backhoe: **42 hauls** = Column C, Old Backhoe: **3.26 ton** (Average weight each box Old)

Column B, New Backhoe: **114.73 ton** ÷ Column A, New Backhoe: **26 hauls** = Column C, New Backhoe: **4.41 ton** (Average weight each box New)

Column B, Old Backhoe: **137.1 ton** + Column B, New Backhoe: **114.73 ton** = **251.83** ÷ 2 = Column E: **125.92 ton** (Average Total Tonnage, Old plus New)

Column E, Old Backhoe: **125.92 ton** ÷ Column C, Old Backhoe: **3.26 ton** = Column F, Old Backhoe: **38.62 x $198.50** = Column G, Old Backhoe: **$7,666.07**

Column E, New Backhoe: **125.92 ton** ÷ Column C, New Backhoe: **4.41 ton** = Column F, New Backhoe: **28.55 x $198.50** = Column G, New Backhoe: **$5,667.83**

Column G, Old Backhoe: **$7,666.07**— Column G, New Backhoe: **$5,667.83** = **$1,998.24** (Difference in hauling same amount of material)

********** More notes relating to the Double Page Chart on Pages 2 and 3 **********

30 of 31 of the lightest boxes (highlighted in orange on the chart) were pre-CAT, 37 of 47 o f the heaviest boxes were post-CAT. The average weight of Mixed Paper was actually higher pre-CAT (14.68 to 16.21). This is because the weights in February 2015 were greatly affected by snow and ice and the material in the boxes was frozen and could only be partially emptied. The average weight of the three boxes that month was a very low 4.95 ton out of a total of thirteen boxes for the period.

BACKHOE UPDATE (*continued from page 1*)

How often a box is sent out and its weight reflect not only the amount of material but the type of material. A box full of crushable material will stay on site longer than a box with large pieces of solid material. Weather also has a great impact on weights and hauls. Cardboard, if wet, will compact more than if dry. If a material freezes in a box that box may not be able to be thoroughly emptied and will be returned partially full.

Because of these factors, and other subtler ones, such as having to send out a box that is not quite full going into a weekend when it will be busier and knowing that the box cannot be hauled before Monday or Tuesday on a holiday weekend, I felt the most accurate indicator of the difference the machine makes would be to use data over a long period of time and then try to level the playing field with averages.

The new Backhoe came on line at the Transfer Station in September 2013. The data range is comprised of the 20 months prior to that date and beginning in January 2012 and 18 months after through March 2015 when this report was begun. The month of September of 2013 is not included in the totals or average as some boxes were sent out that month before the new backhoe was active. However, because the Metal box had been emptied at the beginning of the month and the weight clearly shows a dramatic increase, it is included in the total for the new backhoe.

The two extra months in the earlier range are there because I wanted to be sure that the months most often affected by the weather (January and February) were equally represented before and after. When the date for April and May 2015 is collected this will balance the sheet.

The first Total Difference of $18,658.50 at the bottom of Column D on the chart on page 1 is the total cost difference over two separate periods, those between the boxes hauled with the John Deere from January 2012 to August 2013, and those hauled by the new CAT Backhoe from November 2014 through March 2015.

The second Total Difference number $11,241.74 at the bottom of Column G on the chart is the difference in cost of the averages of materials brought in ***over the combined period of before and after*** (January 2012 to March 2015 minus the transition period and excepting the September Metal box). This is figured by taking the Total of Tonnages in Column B and diving by 2, giving us the Average Tonnages over the entire period of the study in Line E. That Average Tonnage in Line E is then divided by the average weight of each box of material pre- and post- CAT Backhoe in Column C, separately, giving us the number of hauls for each machine based on a common amount of material (Column F). These figures in Column F are then multiplied by the current hauling fee of $198.50 per ton. **NOTE:** On page 3 I have worked out the formula using Co-mingled Containers.

I feel this final cost difference in Line G gives us an accurate indication of the savings. Even though it is not an actual invoiced dollar amount, it is based on the real differences in the weights and costs of the average boxes over the two periods and shows how each machine impacts those amounts. *(continued on page 3)*

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