

# CONSIDERATIONS FOR PAY – AS – YOU - THROW (PAYT) IN SCARBOROUGH

## 1 WHAT IS PAYT?

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Unit priced municipal trash disposal programs have been around for many years. In the early 1970's states such as California and Michigan realized that municipal solid waste (MSW) disposal was a good program to be funded by user based fees. PAYT programs encourage the Three E's:

- Environment: Less waste generated. It takes natural resources and energy to manufacture, deliver and dispose of any type of item. The waste hierarchy is:
  - REDUCE
  - REUSE
  - RECYCLE

Nationwide studies indicate that additional waste reduction of between 25 and 45 percent can be expected with the implementation of a PAYT program.

- Equity: Regardless of how it is funded, waste disposal costs money. With a PAYT program the costs are paid based on the level of use, not at a flat rate.
- Economics: For Scarborough, less waste means lower disposal costs. A ton of trash diverted out of the waste stream saves \$70.50. Residents have more individual control over how much trash disposal costs. If a person wants to throw away less, they pay less. Conversely, if a persons do not wish to recycle, first it is illegal, but second, those that dutifully comply should not have to pay for others' non-compliance.

PAYT programs are sometimes difficult to implement in a community that has a current program where collection fees are imbedded in the tax base. The shift from "free" curbside collection to a user based PAYT program requires education and outreach to explain the reasons for the program as well as the benefits. Program roll out needs to be done in such a manner that the public has an opportunity to understand the program and how it will be administered. Typically there is one opportunity to roll a PAYT program out so it is critical to get it right the first time!

## 2 CURRENT CURBSIDE COLLECTION PROGRAM

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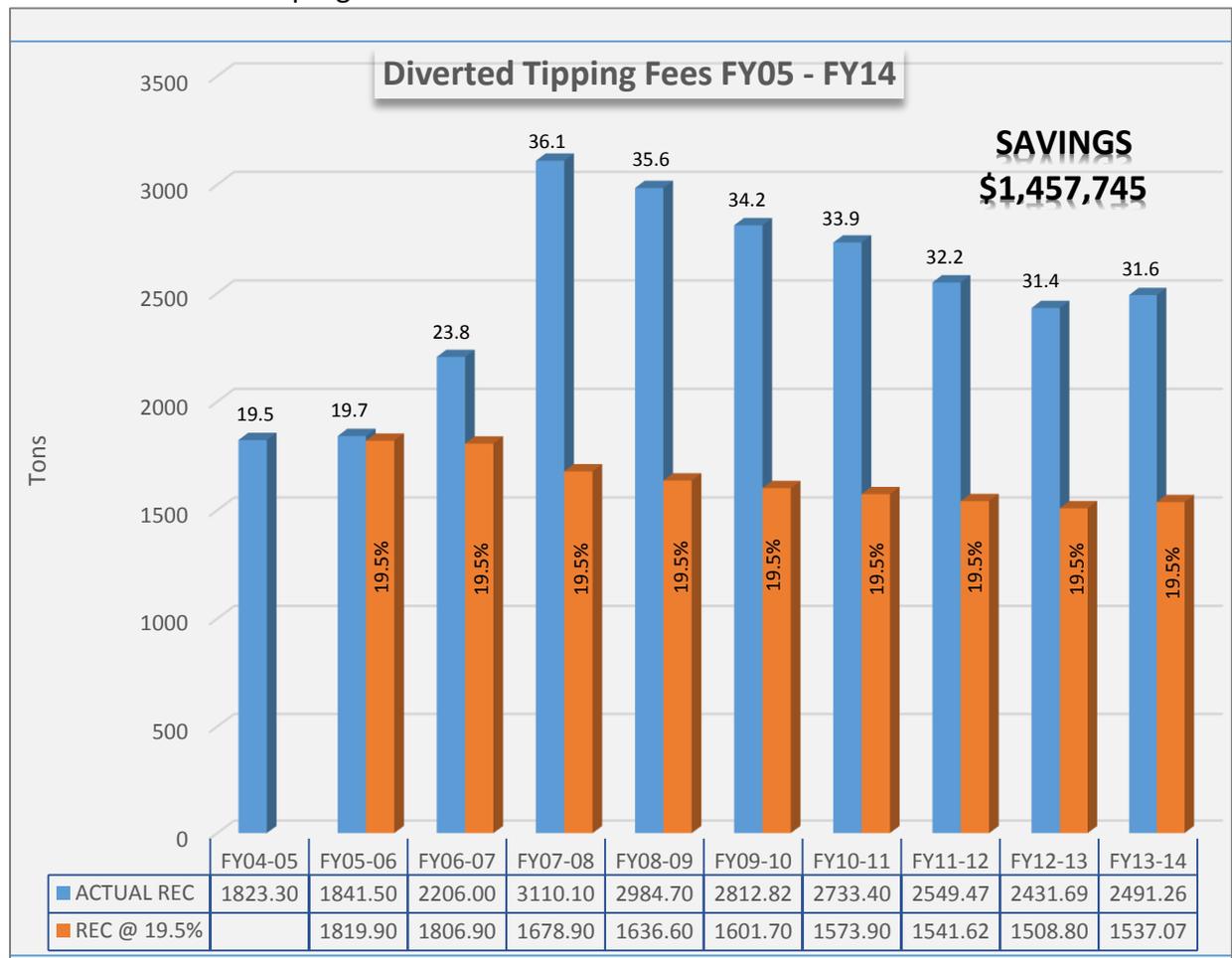
In the spring of 2007 Scarborough implemented automated curbside MSW collection. Prior to this program enhancement, the method of collection was a manual collection program with a traditional rear- load trash truck. For all practical purposes there was no limit to the amount of MSW a resident could dispose of because there was no limit on the amount of bags a resident

could place at the curbside. While most residents used the system fairly, there was a certain level of abuse with this system.

The new automated system requires a resident to use the town issued carts thereby limiting the amount a person can dispose of on a weekly basis. A typical household receives one container for MSW and one container for recyclable material. The cart sizes were chosen based on nationwide data at the time. Funding for the carts was through a \$750,000.00 lease / purchase that will be retired in November of 2016. All indications are that the carts will vastly outlive their ten year life expectancy and that the annual \$15,000.00 line item in the operational budget will cover repairs and new carts for added housing stock.

When the automated collection program started the town also implemented curb side recyclables collection. Because **Ecomaine** converted to a single sort recycling system, it was now possible to collect all types of recyclable materials in one container making it economically feasible to provide this service for the first time. The curbside recycling collection program was a success and something that had been wanted for a long time.

The graph below shows the dramatic increase in recycling due to the introduction of the automated collection program.



The graph is a comparison between pre and post implementation of the automated system assuming that recycling rates would have remained consistent at 19.5% without the implantation of the automated program. The savings in diverted tipping fees amounts to \$1,457,745.00 during the nine year period.

The graph also indicates a peak recycling rate 36.1% during the first full year of the new program. The past three years have seen a recycling rate hovering around 31.5%. There are a number of factors in the recycling rate decreasing such as the change in the economy and the newness of the program wearing off. The current recycling rate is not likely to change much even with renewed education and outreach. Voluntary programs tend to return around a 30 to 35% recycling rate, confirmed by Scarborough’s experience.

### 3 GOALS FOR SCARBOROUGH’S PAYT PROGRAM

Should Scarborough decide to explore PAYT there are a number of benefits. As mentioned earlier in this report, the Three E’s would apply to our community. The program would:

- **Environment:** Help the environment by minimizing the use of natural resources and energy. It would also help support and reinforce the waste hierarchy of :
  - REDUCE – 3,440 Tons Expected to be Removed
  - REUSE
  - RECYCLE – 50% Recycling Rate Expected
- **Equity:** By making trash disposal a metered service it becomes fairer. Those residents who use the service pay for it while those who do not use it as often pay less. In Scarborough’s case the equity rationale is most compelling in that the current curbside collection program is supported through property taxes, however residents without frontage on a public way (most condominiums and private ways) do not enjoy this service yet are paying for it.
- **Economics:** The current waste and recycling curbside collection program costs \$1,159,378.00 annually. Costs are:

<b>MSW COLLECTION</b>	<b>COST</b>	<b>RECYCLING COLLECTION</b>	<b>COST</b>
Collection Contract	\$378,814.00	Collection Contract	\$378,814.00
Ecomaine Tipping Fee	\$387,750.00		
Annual Cart Costs	\$ 7,000.00	Annual Cart Costs	\$ 7,000.00
<b>Total Cost</b>	<b>\$773,564.00</b>	<b>Total Costs</b>	<b>\$385,814.00</b>
		<b>Total Curbside Program Costs: \$1,159,378.00</b>	

As proposed in the budget, a September 1<sup>st</sup> PAYT program start could pay for a large portion of the solid waste disposal budget. With a tipping fee savings of \$139,358 and \$400,625.00 in the sales of bags the cost of curbside collection that would be taken from the tax base would be reduced from \$1,159,378.00 to \$619,395.00. Our specific goal should be cover the municipal solid waste (a.k.a. “trash”) collection and disposal costs through the PAYT program.

**Cost For the average Scarborough resident** – Based on information received from **ecomaine** data the average pounds per capita of MSW for Scarborough is 579.6 pounds per year. The PAYT program assumes a 44% reduction in MSW to 324.6 pounds per capita based on these assumptions the average household would purchase 54.3 bags per year or 4.5 bags per month. If bags are priced at \$1.75 for a small bag and \$2.00 for a large bag the monthly cost for PAYT would be approximately \$9.00 per month or \$108.00 annually.

This assumption seems realistic. Six local communities in Greater Portland that currently have PAYT have an average 298.2 pounds per capita of MSW. The six municipalities are:

- Cumberland
- Gorham
- No.Yarmouth
- Portland
- Pownal
- Windham

## 4 WHY WASTEZERO?

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Although there are other companies that involved in aspects of PAYT, based on our research WasteZero appears to offer the most comprehensive package of services. WasteZero operates in over 800 communities nationwide and 41 in Maine and by all accounts they appear and the industry leader. In consideration of WasteZero overseeing all education and outreach related to implementation, provision of the bags (they actually manufacture them), distributing the bags to the local retailers and managing the financial aspects of the program, WasteZero’s proposed compensation is \$.22 for small bags and \$.29 for large bags sold. They keep their portion of the sales and return the remainder to the Town on a monthly basis.

As part of our research on the PAYT program and WasteZero, a series of questions was sent a number of Maine municipalities. Below a complete reporting of the direct responses.

### ● Education and Outreach

Waste zero has been very responsive. They partnered with **Ecomaine** at 5 public events throughout July & August. They also attended council meetings and public hearings in advance of the introduction. Waterville also contracted with WZ to do a city-wide mailing of information

packets containing two sample bags and program information for PAYT and recycling. We have worked extensively with staff members of WZ including marketing and financial support. The city has chosen to defer any wide spread efforts until the new Mayor begins term in January and has a chance to develop a solid waste platform and define budgetary decisions this spring. So, at no fault of theirs, WZ education and outreach has been put on hold for now.

- **Mark Turner, Public Works Director, CITY OF WATERVILLE, ME**

Waste Zero provided a lot of up-front education in the form of presentations to our Board of Selectmen. Waste Zero offered to assist, but I mainly did the education for the public to give them a municipal perspective. If you want them doing more of the public presentations, I'm sure they would.

- **Paul S. Tilton, PE, DPW Director/Town Engineer, TOWN OF SANDWICH, MA**

We did not contract with Waste Zero to do any of the education. We did it all ourselves by trying to get to the public as many ways as we could think of. If adequacy is measured by the smoothness of the rollout, I think we did ok.

- **Lee Leiner, PE, Deputy Public Works Director, CITY OF BATH, ME**

Waste Zero worked with the city to design a public outreach program of not less than 8 public forums, newspaper articles, web based information and radio spots. Waste Zero attended and presented at each of the forums, did live radio spots, and also met with clubs as part of the public education process. If anything, the amount of information disseminated was more than needed, but produced the desired outcome of passage by public referendum vote. Waste Zero also aligned Ecomaine to be part of all of the public information meetings to educate/inform the residents about the use of the single sort facilities within Sanford's contract.

– **Steven R. Buck, City Manager, CITY OF SANFORD, ME**

### ● **Agreements Signed/Implementation**

There was about a year (June 2013 to May 2014) of study and analysis. The program was adopted in June during final budget deliberations. We had about a three month implementation process, possibly a little more of an aggressive time-frame than other communities have used. Contracts were signed in July after the FY14/15 year began. Curbside recycling launched on July 21<sup>st</sup>. PAYT began on September 8<sup>th</sup>.

– **Mark Turner, Public Works Director, CITY OF WATERVILLE, ME**

There was a lot of legwork before any agreements were signed (meetings, structure of program, by-in, etc.). But once we signed the contract, the implementation was relatively easy, probably taking about three – four months.

- **Paul S. Tilton, PE, DPW Director/Town Engineer, TOWN OF SANDWICH, MA**

We went out to bid in June 2007, signed a contract around July 1<sup>st</sup>, placed our first bag order on July 20<sup>th</sup>, and implemented our program (to the public) on October 1<sup>st</sup>.

- **Lee Leiner, PE, Deputy Public Works Director, CITY OF BATH, ME**

The Council entered into an agreement with Waste Zero on February 19<sup>th</sup>, 2013 to design, disseminate the program information, aid in the June referendum vote, and subsequently implement the program design if passed. Waste Zero and the city did a series of public forums throughout March and April as well as two public hearings before the city Council to pass a Solid Waste Ordinance to codify the PAYT program. The city passed the PAYT Ordinance and program design by referendum vote in June of 2013. The PAYT program started September 1<sup>st</sup>, 2013, three months after the vote on the ordinance to implement. Stores were aligned to sell the bags. Bags were printed and shipped to the stores, hauler education was completed, and the city started the program on September 1, 2013. Waste Zero also has a hotline for consumer questions as well as website support.

- **Steven R. Buck, City Manager, CITY OF SANFORD, ME**

### ● **PAYT Program Active How Long?**

7 Months.

- **Mark Turner, Public Works Director, CITY OF WATERVILLE, ME**

We are in our 4<sup>th</sup> year.

- **Paul S. Tilton, PE, DPW Director/Town Engineer, TOWN OF SANDWICH, MA**

Day one was October 2007.

- **Lee Leiner, PE, Deputy Public Works Director, CITY OF BATH, ME**

Since September 1, 2013.

- **Steven R. Buck, City Manager, CITY OF SANFORD, ME**

### ● **Recycling Rate Prior To /Since Implementation of PAYT**

Before: Very low. No formal program. Voluntary drop-off. After: We only have about 5 months of data from Ecomaine at this time. Recycling rates are just below 60 tons per month. This seems a little bit lower than we had hoped. Not yet sure what the annual percentages will be.

- **Mark Turner, Public Works Director, CITY OF WATERVILLE, ME**

Our most recent numbers shows our co-mingling (cans/plastic/bottles) to be down 68% compared to pre-PAYT. Our paper is down 9% compared to pre-PAYT (most people were already recycling paper before PAYT).

- **Paul S. Tilton, PE, DPW Director/Town Engineer, TOWN OF SANDWICH, MA**

Depends on how you calculate it. See the following data showing our program as it existed in 2006, prior to implementation of single stream recycling, then the data for our program with single stream recycling but prior to PAYT, and, finally after implementation of both programs together. Generally, the tonnage of waste collected curbside was reduced by 50% and the tonnage of recycling collected went up about 44%. Our raw, residential-only recycling rate prior to everything was around 20%. It is currently about 45% but this calculation is simpler than the official, annual, state calculation.

- **Lee Leiner, PE, Deputy Public Works Director, CITY OF BATH, ME**

Before: Sanford's recycling rate prior to PAYT had dropped to below 21%. After: Sanford's recycling rate is now over 47% and holding.

- **Steven R. Buck, City Manager, CITY OF SANFORD, ME**

### ● **Any Unexpected Expenses ?**

Recycling bins were handed out at the public events as promotional items by **Ecomaine**. Limited quantities soon ran out causing a lot of anger among residents. Due to increasingly intense demand from residents and local officials, the city ended up buying bins from **Ecomaine**. We also had recycling stickers made that could be placed on repurposed trash containers. The bins became our biggest unexpected expense, although there was some acknowledgement that this should have been included in the program to begin with. The city-wide mailing cost more than expected. There was a misunderstanding that this was supposed to be included in Waste Zero's contract. We went forward with this anyway and WZ helped with coordination and execution. They provided a tremendous amount of support in laying the groundwork, planning, and set up and meeting the city's deadline. Use (sales) tax on the bags. The retail outlets do not collect sales tax on the bags.

- **Mark Turner, Public Works Director, CITY OF WATERVILLE, ME**

We did not encounter any unexpected expenses.

- **Paul S. Tilton, PE, DPW Director/Town Engineer, TOWN OF SANDWICH, MA**

Not really. Make sure to account for the inevitable increase in bag prices and plan to continue with a reduced version of your educational program. We created a bumper sticker and refrigerator magnets that are reordered occasionally. I also go through a lot more 18-gallon recycle bins now. Also, the city pays a use tax to the state which allows us to sell the bags sales-tax free.

- **Lee Leiner, PE, Deputy Public Works Director, CITY OF BATH, ME**

We did not incur unexpected expenses. We did favorably hit the performance clause within our contract after the second quarter and have maintained that level of performance since. The largest unexpected element of the program was the amount of the solid waste stream that was no longer part of the overall municipal collection program, i.e. recyclables or MSW. By the end of the first year there was over 1,500 tons of trash that no longer came through the municipal collection system. This was due to the prevention of non-resident trash disposal, the conversion to private collection accounts by some rental units, and/or the non-generation of the waste within our community.

- **Steven R. Buck, City Manager, CITY OF SANFORD, ME**

### ● **Satisfaction with Service Level Waste Zero Provides the Community**

As with any large scale implementation of a totally new system, there have been some bumps in the road at every level. Waste Zero and Ecomaine have both been extremely responsive and good to work with. The programs are still fresh and evolving. We also face a referendum vote in

June. In the coming weeks, these two companies will be called upon to assist in providing information about the programs to help shape the broader discussions in the community.

- **Mark Turner, Public Works Director, CITY OF WATERVILLE, ME**

Yes, we are satisfied with the level of service.

- **Paul S. Tilton, PE, DPW Director/Town Engineer, TOWN OF SANDWICH, MA**

Very satisfied. They take all the orders direct from local retailers – the city is not engaged in selling bags in any way. Waste Zero ships the bags to the retailers upon order receipt. They collect the money from the retailers and wire it to the city’s account monthly. They let us know when it’s time to make more bags and they send an order form and an invoice. Finally, they send a monthly report with lots of info. It is almost completely hands-off for us and has worked smoothly.

- **Lee Leiner, PE, Deputy Public Works Director, CITY OF BATH, ME**

Yes, Waste Zero has performed as delineated within our agreement. Their predictions on the impacts to our solid waste were very accurate. The city will be making further changes to our program in the future based upon Waste Zero’s recommendations once the City Council is comfortable with the continued success of the program.

- **Steven R. Buck, City Manager, CITY OF SANFORD, ME**

#### ● **If You Could Do It Over, Would You Change Anything?**

The two programs have been mostly successful in terms of implementation and acceptance. MSW tonnage reductions have exceeded initial projections. This is due to PAYT, curbside recycling, residents hiring private contractors and waste simply disappearing (out-of-town dumpers who used our previously free waste disposal service).

The only thing we might want to change would be going to “every other week” rather than a “twice per month” curbside recycling program. Residents are sometimes confused by the collection schedule.

- **Mark Turner, Public Works Director, CITY OF WATERVILLE, ME**

Make sure the stores are well supplied for the initial onslaught of purchases. Even though Waste Zero warned the stores, they did not stock enough bags and ran out. Also, keep some bags at the DPW to help with sales over that first month.

- **Paul S. Tilton, PE, DPW Director/Town Engineer, TOWN OF SANDWICH, MA**

The one big ripple we had was getting the retailers on board in a timely fashion. Unfortunately on day one, there were no bags to be had in the city. None of the retailers had placed an order yet so we had some bags shipped directly to us and we wound up distributing the bags ourselves for a month or so. Ancient history now but that was the only glitch in the process. Of course the residents complain about the bag quality once in a while, but the bag specs are comparable to brand name bags and there should be a certain failure rate that is expected with any product. If residents produce what appear to be defective bags, they are advised to return them to the retailer where they will be replaced free. The retailer is instructed to return the defective product

to Waste Zero. This has not been a big issue. As far as I'm concerned, the company has done well by Bath.

- **Lee Leiner, PE, Deputy Public Works Director, CITY OF BATH, ME**

I would have changed Sanford's collection of recyclables in marked open containers to using clear recyclables bags. We have issues on very windy days with loose trash blowing. The non-use of bags was to allow collectors to visually see if a resident was sorting properly and reject the container if needed. The clear bag allows for the same level of inspection yet provides for a more rapid collection of materials as opposed to dumping and resting open hard containers. There should be the ability to calculate a reduced cost of collection under the clear bag program. This is a current recommendation by Waste Zero to Sanford and is dependent upon the City Council so authorizing.

- **Steven R. Buck, City Manager, CITY OF SANFORD, ME**

## 5 CONCLUSIONS ON PAYT

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Through enhanced education and outreach it may be possible to return the recycling rate to the high point of 36.1%, but it will be difficult to achieve. Supported by several decades of data from communities all across the county, the research is clear that the only way to make significant gains in the recycling rate (and therefore reduction of MSW for disposal) is through the implementation of a volume-based rate system such as PAYT. Based on the research, a reasonable goal is a 45% recycling rate (the State of Maine has a goal of 50%).

Scarborough made significant progress with the implementation of curbside recycling, but those gains have receded in the ensuing years. Anecdotally, residents like the curbside program given the ease of handy carts and single-stream recycling. The carts have held up incredibly well and are likely to exceed the predicted life-expectancy by double. Because the entire cost of this program is underwritten by the taxpayer there is no incentive to reward those that comply and more importantly, the current system rewards (by not having them pay more) those that do not comply (or at least maximize their recycling opportunities).

PAYT programs are increasingly popular, with over 25% of the U.S. population and 31% in Maine participating in one variation or another. Coupled with our successful curbside collection program and the fact that we have a large number of single-family homes, there is no doubt that with adequate education and publicity a PAYT program could be successful in Scarborough. Such a user fee system would assure equity; increase recycling and thereby reduce disposal costs; reduce the overall volume of MSW and produce a revenue stream to offset the costs of the curbside collection program. Among all municipal services we provide, solid waste collection is the best candidate for a user-fee based system. Staff remains committed to increasing recycling and developing cost-effective services and stand ready to assist the town council in this conversation.

April 15, 2015