

**Final Report of  
ANDOVER PAY-AS-YOU-THROW STUDY GROUP**

**December 9, 2003**

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## 1 Executive Summary

The Andover Pay-As-You-Throw (PAYT) Study Group was commissioned in early October 2003 by the Board of Selectmen. The mission for the Study Group was to:

1. Determine the feasibility of implementing a PAYT system for Andover, understanding that decisions for implementation rest with the Selectmen.
2. If a PAYT program is feasible, determine which approach (or approaches) best provides sustainable waste mass reduction, increased recycling volume and significant net revenues.

During weekly meetings held in October and November (Appendix A), the Group gathered information from other towns where a PAYT program has been implemented. The Study Group:

- Met with or spoke with representatives of the following towns regarding their experience with PAYT: Natick, Gloucester, Worcester, Concord, Chelmsford, and North Reading, and
- Reviewed written summaries of other PAYT programs including: Boxford, Topsfield, Taunton, Brockton, Medway, Milton, and Holliston.

Summaries of the PAYT experiences for these towns are provided in Appendix B and Appendix C.

The Group also examined Andover's solid waste and recycling system, tonnage statistics and costs. The financial impact of PAYT was examined using a financial planning model, to incorporate the costs, benefits, cost savings, and new revenues. The financial model and its results are included in Appendix D. This report summarizes the work done by the Study Group and its conclusions.

The group learned that these communities with ongoing PAYT programs have met the three key criteria in our mission, namely

- a) significant net revenues;
- b) sustained reductions in solid waste mass over the long term (> 10 years in some cases) in the range of 17 to 45 percent; and
- c) 2.3 to 3.15 fold increase in recycling.

The principal findings of the Study Group are as follows:

*The Study Group finds that a pay-as-you-throw system is feasible for Andover and can be structured to meet the objectives in the Study Group's mission, including sustainable reductions in solid waste amounts, increased recycling volumes, and significant net revenues.*

*If implemented, the Study Group recommends the following specifics that:*

- *bags be used as the primary mechanism for payment of solid waste fees;*
- *two sizes of bags be offered (a 30-gallon bag at \$1.50-\$1.75 and 15-gallon bag at \$0.75 - \$1.00);*
- *residents be required to pay for all bags (none "free");*
- *subscription stickers be considered as an additional option;*
- *the Town not implement an annual fee per household;*
- *the Town take the implementation steps necessary including establishing by-laws, determining staff needs, and further defining the options available for handling bulky waste.*

The subsequent sections of this report provide a more detailed discussion of the Study Group recommendations and rationale.

## 2 Feasibility

The Board of Selectmen requested that the Study Group determine the feasibility of a Pay-As-You-Throw plan for Andover. The plan, if recommended, must meet the following objectives:

- Produces significant revenues
- Reduces solid waste disposal
- Increases recycling

During October and November 2003, the Study Group reviewed the real world experience of 15 Massachusetts communities that implemented a PAYT plan with similar objectives. Importantly, too, the group considered the operational impact on the Town's existing infrastructure. The review of these existing programs and our discussions with key Town management form the core of our research.

**Based on that research, the group believes that a PAYT program can be designed that meets the objectives listed above. Our rationale for achieving each objective is outlined in the following paragraphs.**

### 2.1 Significant Revenues

The plan envisioned by the group would require residents to purchase program-specific bags from participating retail outlets in Andover and surrounding communities. As detailed in the Executive Summary and in other sections of this report, the group is proposing two (2) bag sizes – 15 and 30 gallons priced at \$.75 to \$1.00 and \$1.50 to \$1.75, respectively. The financial benefits from reducing disposal costs and the sale of the trash bags will offset the Town's cost of disposal and reduce the solid waste budget by approximating \$745,000 - \$860,000 annually. The basis for this estimate is a financial model that incorporates incremental costs, cost savings, and new revenues. The model is included in Appendix C. The recommended price reflects Andover's actual variable cost of disposal. This concept of pricing based on variable costs of disposal has proved successful in other towns. For example,

- Natick is on track to meet its goal of offsetting \$1.0 million in disposal costs.
- Gloucester generates between \$500,000 and \$1.0 million in net revenue to offset the disposal cost portion of their solid waste budget.
- Medway's PAYT has allowed the Town to reduce the solid waste budget.

### 2.2 Reduced Solid Waste

The PAYT programs we reviewed all succeeded in reducing the amount of solid waste generated by their residents and ultimately disposed of by these Towns. Reductions in solid waste tonnage vary by type of program and the unit price charged. For example,

- Brockton had a 24% reduction in solid waste tonnage after initiating PAYT.
- Natick is on track to see an annualized 20-25% reduction in solid waste tonnage.
- Worcester's current solid waste tonnage remains 24% below the amount they disposed of before starting PAYT.
- Gloucester's tonnage today is 40-45% below their tonnage prior to PAYT.
- Lexington's tonnage dropped 33% in the year that included 9 months of PAYT.

## 2.3 Increased Recycling

Our review of existing programs also clearly underscored the increase in recycling these communities experienced. Similar to the resident's attitude toward solid waste, the public awareness generated by PAYT plans leads to dramatic increases in the amount of recycled waste. The increases in recycling experienced in PAYT depend on the level of recycling prior to implementation so there is quite a wide range. For example,

- In Lexington, where a very successful recycling program existed prior to PAYT, their recycling tonnage increased by more than 25%
- In Brockton, where their recycling program was less fully utilized, their recycling tonnage increased over 250% and their collection of compostable materials increased 180% upon implementation of PAYT.

## 2.4 Observations

- **Guaranteed Annual Tonnage Obligation** - The Town's current contract with the Wheelabrator North Andover incinerator includes a Guaranteed Annual Tonnage (GAT) clause. In the past years, the other members of the Northeast Solid Waste Consortium (NESWC) have worked together to allow those whose actual tonnage exceeds their GAT to broker tonnage with those towns whose actual tonnage is below their GAT. In Andover, the current tonnage exceeds our GAT but PAYT has the potential to reduce our tonnage below our GAT. This would put the town in the position of brokering for additional tonnage from other NESWC towns. This is routinely done by many NESWC towns and there are many towns with excess tonnage willing to broker. The impact of brokering has been taken into account in the financial projections. In the new contract, taking effect in September 2005, there is no required GAT, so the issue is not of concern after that date.

The Study Group learned much about some of the impediments other communities experienced when implementing their PAYT plans. The following will list the more important obstacles that the Town should carefully weigh prior to putting a PAYT plan in place:

- **Bulky Waste:** An effective plan *must* provide the residents with a method of disposing items that will not fit in the program-specific trash bags. The plan must be comprehensive including everything from small pieces of furniture and construction/demolition waste to CRTs and large appliances.
- **Barrels:** Any PAYT plan *must* allow residents to continue to utilize trash barrels.
- **Illegal Dumping:** Numerous Andover residents have expressed concern that PAYT would lead to illegally-dumped trash on private property and in trash barrel on downtown streets. Other communities have had similar concerns when considering the adoption of PAYT. The Study Group has learned that some incidents of illegal dumping are common when a PAYT program is first put in place, but that with adequate enforcement, public outreach, and recycling services, the level of illegal dumping incidents rapidly returns to the same low level as before PAYT. While other PAYT communities have found this problem to be quite manageable, there needs to be a renewed awareness and vigilance. Residents need to be made aware of enforcement and those efforts require the ability to fine offenders when identified.
- **Bag Pricing:** The Town needs to have a mechanism to adjust the price of program-specific trash bags. In North Reading, the failure to have a forward looking pricing model, and the means to

adjust the price of bags, ultimately led to the program being canceled. Instead, residents are now charged a fixed annual fee and the benefits of PAYT (i.e. decreased solid waste, increased recycling and an equitable usage-based fee) have been negated.

- **Public Education /Communication:** A thorough, comprehensive program to educate residents on both the benefits and operational logistics of the new plan is critical to its acceptance and ultimate success. The residents will need ongoing communication that continues to provide program education.
- **Customer Service:** It is critical that the residents have a clearly defined and knowledgeable source at Town Hall to contact with questions, complaints and for general information.

Lastly, implementing a PAYT program will require a significant change in how each resident disposes of solid waste. Convenience and ease of participation must be a key consideration at every step in this process.

### **3 Disposal System – Bags, single-use stickers, or subscription stickers?**

Several options are available for PAYT systems. Those options are (1) specially colored and printed trash bags, (2) single-use stickers for use on commercial trash bags, or (3) subscription stickers for use on trash barrels. In all of these options, it is important to note that residents can continue to use their barrels.

In its research, the Study Group gathered information from 15 Massachusetts cities and towns, all of which have curbside solid waste and recycling collection programs similar to Andover's current program. Of the 15 cities and towns, about half use bags and half use single-use stickers. From discussions, we've heard pros and cons of each.

The advantages of using special bags are listed below.

- The visibility of colored bags is a good reminder for residents and helps communicate the system to new residents.
- The bags make collection easier for the drivers because they don't have to look as hard for single-use stickers that may be anywhere or may have fallen off.
- Bags also make it easier to ensure a standard size.
- With bags, the Town can offer a smaller bag that is priced lower and even disproportionately low to encourage waste reduction and to serve senior citizens and single person households.
- Bags also make it easier to predict and quantify the waste collected because there is less variability than when residents put a sticker on a bag or barrel of their own choosing.

The single-use stickers have advantages but the Group felt the advantages of bags were greater.

The advantages of single-use stickers include:

- Tags are flexible; they can be used on any type of bag. Residents can continue to use the bag of their choice. Single-use stickers can also be used on odd-shaped items that don't easily fit into bags. Single-use stickers can be put on the handles of trash barrels if residents don't want to use bags at all.
- Single-use stickers are cheaper to produce would generate greater net revenue.
- Single-use stickers are smaller, serialized, and easier for retailers and the Town to store and track.
- Single-use stickers don't compete with the sale of store brand bags or bags on which the store earns a profit.

Disadvantages of single-use stickers are that:

- It is difficult to enforce a uniform size since residents purchase their own bags or use excessively large barrels, which affects the revenue generated for the Town.
- Some towns report problems such as claims that they fell off on rainy or snowy days or that they were removed by vandals from trash left at curbside.
- Single-use stickers are harder for the driver to see.
- The first level of enforcement resides with the driver.

**Having considered the advantages of each option, the Study Group recommends the use of bags instead of single-use stickers and further recommends the Town offer two sizes (15- and 30-gallon) bags.**

There is an option of subscription stickers that can be placed on a trash barrel. These stickers would be purchased once or twice a year and used by a resident in lieu of using either bags or single-use

stickers. The advantage of this option is the flexibility and ease of use for residents. The disadvantages are that it is less easy to control the size of barrel used and has the potential to allow residents significantly more capacity than a bag. In addition, the Town would have to set up a system for selling them, either through retailers or Town offices. Further investigation is needed to address the logistical, handling, and pricing issues before offering subscription stickers.

**The Study Group recommends further investigation and consideration of this option.**



#### **4 Recommended Cost per Bag**

The Study Group has heard from other towns and examined the financial impact of various options. The Study Group feels that unit pricing should be a function of several considerations:

- What other towns charge,
- Reliability of revenues (which is achieved by setting unit prices to cover actual disposal cost for 25-30 pounds of trash plus other variable costs, not fixed costs such as collection), and
- Some measure of incentive to reduce trash levels.

One significant difference between PAYT programs in other towns is whether they offer the first bag or barrel “free” for each household. The Study Group examined this option and discussed it with other towns. The loss of revenues under such an option is significant and would not be consistent with the Board of Selectmen’s goal to generate “significant net revenues”. In addition, the “free” option is difficult to enforce with any level of equity, especially where multi-family homes are involved.

**The Study Group recommends that a PAYT program in Andover require residents to pay for every bag.**

The Study Group’s research indicates that the range of unit prices in other towns varies between \$1.00 and \$2.00. Andover’s contract cost per ton for disposal at the Wheelabrator waste-to-energy facility is currently \$150/ton for FY05. Through NESWC, Andover has established a stabilization fund which the Town will draw on to pay approximately \$75 of the \$150/ton, leaving a net cost of \$75/ton to be paid out of tax revenues in FY05. In FY06, a new contract comes into effect and the cost per ton changes to \$64<sup>1</sup>. The net cost of \$75 per ton equates to \$1.125 for 30 pounds. Other variable costs such as the cost of the bag (\$0.16 each) or tag (\$0.02 each) should be included. In addition, there should be a margin for the unexpected and for the price to remain stable for 2-3 years.

The Study Group’s research also indicates that setting the unit price to cover the variable costs provides greater stability in the financial projections of net revenues to the Town.

**The Study Group recommends a bag price of approximately \$1.50 – 1.75 per large (30-gallon) bag. A lower price should be set for the smaller (15-gallon) bags, approximately \$0.75 - \$1.00.**

The recommendation from many experts and other towns is that fixed costs should be covered by a fixed source of revenue. Most PAYT communities continue to fund fixed costs out of the tax revenues. Fixed costs include town-wide collections provided for solid waste, recycling, leaves, household hazardous products (HHP), and consumer electronics. Financial problems have arisen in towns that tried to cover fixed costs with bag revenue. As the sale of bags decreased, they were unable to generate the required revenue to cover the fixed costs. Some towns have imposed an annual fee to cover fixed costs. This would further reduce the demand on the tax revenues but would be a dramatic change and increase in cost for Andover residents.

**The Study Group recommends that the Town *not* implement an annual fee in addition to the fee for the bags.**

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<sup>1</sup> The cost increases yearly thereafter in the following pattern: \$64, \$68, \$69.50, \$71.50, \$73.

## **5 Program Implementation**

The lessons learned from others and from listening to residents are that the following key issues need to be addressed in the implementation of a PAYT program.

- Illegal dumping/Enforcement;
- Convenient availability at numerous retail outlets;
- Options for handling large or bulky items;
- Public education and communication with residents and the truck drivers; and
- PAYT implementation costs, both initial start-up and ongoing costs.

All residents and the Study Group are concerned about illegal dumping. As part of its research, the Group asked every town about their experience with this problem and how they dealt with it. In general, the answer has been that a Town needs to be prepared at the outset to deal with some initial illegal dumping but that with enforcement and reinforcement of the publicity and a good recycling program, the level of illegal dumping is very low and no different than before the start of PAYT. The Town of Andover will need to determine which department and which personnel in particular will handle the calls and how.

**The Study Group recommends that the Town establish any necessary by-laws or provisions to enforce PAYT.**

The Study Group also recognize that a PAYT system may increase the potential for Andover residents, who wish to avoid paying for trash disposal, to dump trash in neighboring communities.

**The Study Group recommends that the Selectmen provide for enforcement of regulations and by-laws governing PAYT.**

A key to the success of PAYT programs is minimizing the inconvenience involved. Some towns sell bags with a markup. Other towns have found retailers willing to sell bags or single-use stickers without a markup because of the additional traffic. Some towns have chosen to only sell through in-town retailers; some have worked with retailers out-of-town. Small towns, such as Boxford, sell through four local convenience stores. Larger cities, such as Worcester, sell through over 100 retail outlets. Natick, similar in size and development to Andover, sells through 7 retailers large and small, both inside and out of town.

The Study Group polled participants in the public hearings about locations where the bags should be sold. Preferred locations included CVS and Market Basket. Many communities also offer their bags for sale through local convenience stores. The Study Group has not entered discussions with any retailers but considers that to be an important next step. The Study Group is not prepared to make a recommendation regarding whether bags should be sold with or without a markup.

The Town of Andover currently collects bulky items in the solid waste collection trucks on a weekly basis. It is a very easy system. Unfortunately, a significant number of towns around us are changing their bulky waste system for their residents and beginning to charge for large items and even for CRT and HHP collections. Several of the nearby cities are already experiencing an inflow of bulky items from other PAYT towns. Changing this part of the system may be the most challenging aspect of moving to a PAYT system in a town without a local recycling or drop-off center. Options that have been used in other PAYT towns without a drop-off center include:

- A fee-based, curbside collection system.
- A voluntary “Drop & Swap” program in the spring and fall that provides residents with a low-cost opportunity to get rid of all types of large items. For example, in Concord, items that are good and reusable are set aside in a reuse area. Charities are invited to collect bicycles, furniture, etc. Residents are charged nominal fees to cover the cost of other items.
- A tax-funded series of designated days (2-3 per year) for special collections. Some towns find it more cost-effective to separate metals collections from the collection of burnable items.
- Christmas tree collection could still be offered at no added charge since it is limited in time and has little impact on the weight of trash paid for by the Town.

The Study Group feels that continuation of our current system may set us up to receive an excessive amount of “imported” waste.

**The Study Group recommends that Andover offer some or all the options listed above for bulky waste disposal.**

Towns that have successfully implemented PAYT have often designated or hired a program coordinator as a point-person. Different towns have different programs as well as different pre-existing staff capabilities. They have each supplemented their existing staff in some way. Some have added part-time personnel for a short time. Others have added full-time staff permanently.

The roles of the PAYT coordinator could include any combination of the following roles:

- Communication with the public (publicity, outreach, answering questions and complaints);
- Communication with the recycling hauler (and overseeing the contract)
- Communication with the solid waste hauler (and overseeing the contract)
- Selling subscription stickers, bags or single-use stickers or mailing out stickers ordered by mail or internet;
- Procuring the bags/single-use stickers and/or stickers;
- Coordinating with retailers;
- Taking enforcement action when required;
- Issuing invoices to retailers;
- Tracking tonnage results and costs;
- Enhancing recycling program options; and
- Coordinating bulky waste program(s).

At the public hearings, residents were asked what form of communication would be most likely to reach them. Many indicated that the most effective outreach methods would be the Townsman, mailings and flyers, and public meetings and presentations. Based on suggestions from others towns, we would also recommend use of electronic signs, a hotline phone number, and violation notices that give information to residents when they haven’t used the proper bag or tag at the start of the program. A projected cost has been included to address the potential need for additional staff in all financial projections.

**The Study Group feels that some additional staff time will be required for each of these tasks but that more in-depth discussion with existing Department heads is needed before determining if new staff are required and if the requirement is for full-time or part-time staff.**

## Appendix A Andover Pay-As-You-Throw Study Group Meetings

The Study Group has held the following public meetings and hearings:

Date	Location	Type	Guests
21-Oct	Library Activity Room	Group meeting	Brian Major, Board of Selectmen
27-Oct	Town Offices 3rd floor conf room	Subcommittee meeting	Joanne Marden, Finance Committee
30-Oct	Town Offices 3rd floor conf room	Group meeting	Brian Major, Board of Selectmen Joanne Marden, Finance Committee Tom Urbelis, Town Counsel
4-Nov	Town Offices 3rd floor conf room	Group meeting	George Russell, Sanitation & Recycling Supervisor, Natick Bob Fiore, Assistant Director DPW, Worcester (phone) Sue Mitchell, DPW, Gloucester (phone)
7-Nov	Town Offices North Reading	Interview	Dave Hanlon, DPW Director, North Reading
13-Nov	Town Offices 2nd floor conf room	Group meeting	Barbara Scavese, former Recycling Coord., Chelmsford Ann Dorfmann, Recycling/Disposal Administrator, Concord
17-Nov	Town Offices 3rd floor conf room	Group meeting	Rodney Smith, Town Accountant, Andover David Reilly, Town Treasurer, Andover Anthony Torrisi, Finance and Budget Director, Andover Dennis Sheehan, Public Works, Andover Jack Petkus, Public Works Director, Andover Everett Penney, Director of Health, Andover
18-Nov	Water Treatment plant Conference room	Group meeting	None
20-Nov	School Admin School Comm. Room	Public Hearing	11 members of the public
21-Nov	School Admin School Comm. Room	Public Hearing	5 members of the public
25-Nov	Library Memorial Hall (3rd fl)	Group meeting	None
1-Dec	Town Offices 2nd floor conf room	Group Meeting	None
2-Dec	Town Offices 2nd floor conf room	Group Meeting	None
9-Dec	Library Activity Room	Group Meeting	None

## **Appendix B Collected Data from Towns Interviewed with PAYT**

This appendix provides summaries of the pay-as-you-throw programs and experiences of the towns interviewed by the Study Group. A series of basic questions were developed for these interviews, and the responses to these questions are transcribed for each town:

- Natick
- Gloucester
- Worcester
- Concord
- Chelmsford
- North Reading

## Natick's PAYT System

Population:	31,000	Trash collection:	curbside
Households served:	10,300	Recycling collection:	curbside
PAYT system:	\$1.75/large bag, \$1.00/small bag, none "free"		
Contact(s):	George Russell, <a href="mailto:GRussell@natickma.com">GRussell@natickma.com</a>		

1. What is the basic program?
  - a. Bags
  - b. Price: \$1.75 per 32-gallon bag (max 25 lbs), \$1.00 per 15-gallon bag (max 10.5 lbs)
  - c. Barrels allowed? Yes if use bag, to help keep animals from tearing bags
  - d. Flat fee per household? For FY03, they implemented a flat fee of \$175/hh but dropped it when started PAYT in FY04.
  - e. Number of Items given out "free"? None, no low-income price break either
2. Average number of bags sold/y: \_\_\_\_\_
3. Tons of waste generated/y: prior to PAYT, we were averaging 9,500 tons. With PAYT, we will probably reach 7,500-8,000
4. Tons of recyclables/y: Paper will probably reach 3,800-4,000 tons- co-mingled will reach 1,800-2,000 tons
5. How are bags distributed? At 7 stores including: Two Stop and Shops, one in Natick and one in Framingham, Roche Bros, Town Paint, Lil Peach, Tilly's, Donelans Supermarket and Jones Drugstore. Retailers get an official poster.
6. Who prints bags and at what cost? Who delivers? Boxes and Bags prints and delivers to town. Natick purchased a trailer in which to store the bags. \_\_\_\_\_ does the delivery to stores on a weekly basis. They use a 2-part ticket to generate the invoice for sale of bags to stores.
7. Have you Changed prices over time? Just started in FY04.
8. Who handles the administration, distribution, and accounting and how is it done? DPW handles the administration and delivery of the bags. We use a Quicken software package that is connected to Town Hall, Finance dept. When we generate a delivery ticket, it also generates an invoice which is mailed to the respective vendor.
9. How much time does it take? Roughly one and a half hour per week.
10. Who handles complaints? DPW does. Any billing questions are handled at the Finance department

11. How long had the program been in place and what cause the change to PAYT? For FY03, they implemented a flat fee of \$175/hh but dropped it when started PAYT in FY04.
12. Did the Town need to change its recycling program (add another truck, weekly recycling?) Town collects the solid waste; BFI collects recyclables. BFI was the only bidder when they rebid the contract and the cost increased \$100,000 over the previous year. They set it up as a one-year contract. Natick is considering doing the collection of recyclables themselves in the future. We also increased the plastics recycled to #1-#7
13. How many residents use private haulers? At what cost? Not sure how many. I have noticed a couple of private collection barrels in Town.
14. Did you encounter any increase in illegal dumping with PAYT? They use the police and Board of Health for enforcement. They had 3 instances of illegal dumping at the start (washer and 2 bags). The BOH examined, found owner of one of the bags, imposed a non-criminal disposition and \$50 fine and wrote article in the paper (w/o names) to publicize the enforcement action. Not much has occurred since then.
15. What does the Town tell residents to do with:
  - a. bulky waste: \_\_\_Natick had a program in place for a number of years pre-PAYT. DPW collects bulky items twice each month with a pre-paid fee system and it works quite well.
  - b. white goods, CRTs: \_\_\_ Same system as above
  - c. Leaf and Yard waste: \_\_\_Seasonal collections; two weeks in the spring and three weeks in the fall. Residents can also use the recycling center which is open three days a week, all year round
  - d. Xmas trees: \_\_\_ Collected at curbside, 1<sup>st</sup> two weeks of January, weather permitting. Residents can also drop off at recycling center

### **Gloucester's PAYT System**

Population: 30,000 (6000 more in summer)      Trash collection: curbside  
Households served: 14,000      Recycling: curbside  
PAYT system: \$1.50/sticker, none "free"  
Contact(s): Sue Mitchell, [SMitchell@ci.gloucester.ma.us](mailto:SMitchell@ci.gloucester.ma.us)

1. What is the basic program?
  - a. Stickers, limited to 4 bags per week or 3 and one bulky item/week. Those moving out need to rent a dumpster.
  - b. Price: \$1.50 for up to 35-gallon bag or barrel (max 50 lbs)
  - c. Barrels allowed? Yes, if they put sticker on the top bag in the barrel.
  - d. Flat fee per household? No
  - e. Number of Items given out "free"? None, no low-income price break
2. Average number of stickers sold/y: 500,000 stickers sold per year at a cost of \$7000/y. City makes about a \$500,000 above their costs on this system.
3. Tons of waste generated/y: now about 10,000; prior to PAYT had 16-18,000 tons per year. There was a noticeable increase in trash just prior to the start of PAYT, then a 38-45% decrease ever since.
4. Tons of recyclables/y: 2000-3000 tons per year
5. How are stickers distributed? At 40 stores including: All mom and pop, all grocery stores, eateries, liquor stores, and senior center.
6. Who prints stickers and at what cost? Who delivers? Went out to bid and selected Resourceful Bag and Tag who deliver the stickers in cases. They are stored in the City storage warehouse. Warehouse staff delivers to DPW and they are put into the safe. All boxes are numbered and they work down from highest to lowest so they know how many are left. Sue delivers to retailers, as needed any day of the week. Mom and pop stores get small deliveries and may request deliveries 2-3 times per week. Stores pay upon delivery by check. Stores get a 2.5% markup. They pay \$731.25 for 500 stickers and resell at \$750.00.
7. Have you Changed prices over time? Started in 1990 with \$0.50 stickers, then increased to \$1.00 in 1995, \$1.50 in 1999. Prices determined by City Council. Every time price increased they saw a small increase in recycling and small additional decrease in trash.
8. Who handles the administration, distribution, and accounting and how is it done? Sue handles accounting, tracking, pays the bills. City Hall just signs off on deposits.
9. How much time does it take? Sue works full-time on PAYT and recycling coordination.
10. Who handles complaints? Sue does. She works well with the hauler. The hauler calls in daily or emails a list to alert her of problems during the route. Drivers tape-record record of problems. They report to dispatch and dispatch will either call or email the notes to Sue. That way, when a resident calls, Sue knows what happened and why.



11. How long had the program been in place and what caused the change to PAYT? Program started in 1990. Since then, the only change has been the change in price.
12. Did the Town need to change its recycling program (add another truck, weekly recycling?) Gloucester did not choose weekly recycling because it was too costly. When Gloucester switched to PAYT, went out to bid and all bidders were able to shift their way of collecting. They worked out the details with the hauler in advance. Also, the contract requires the contractor to print and mail a recycling brochure yearly, and HHW info, and info about any new changes to the program.
13. How many residents use private haulers? At what cost? None that she knows of, possibly some summer rental places.
14. Did you encounter any increase in illegal dumping with PAYT? They had illegal dumping before and still have some. If someone calls about an illegally dumped bag, they used to have an inspector who could issue a ticket. The inspector would go thru and return to the owner. Now, if left illegally, DPW would go thru it and figure out who's it is. City locked dumpsters at municipal buildings and schools. Some people do throw into trash barrels on Main St. DPW will go thru and call or deliver it back to "owners". At beginning of a program, she recommends having a regular inspection of municipal barrels and dumpsters. Now, down to 5-6 incidences per year at the most, often when someone is moving out. Other issues are mostly residents putting out construction debris to be collected or not using a sticker. PAYT didn't increase amount of illegally dumped waste.
15. What does the Town tell residents to do with:
  - a. Bulky waste: Allow residents to put out one bulky item per week with its \$1.50 sticker. This makes residents feel like they are getting a bargain. See website: [ci.Gloucester.ma.us](http://ci.Gloucester.ma.us)
  - b. White goods, CRTs: CRTs, appliances require \$20 stickers sold at DPW. DPW lists addresses and gives to WMI to pick up on special collection days every other week (they collect about 60 appliances/week). Sometimes there are only 10 people on the list and so WMI is told to hold off. Sometimes they have more than 60 (in the summer) so WMI may add an extra truck.
  - c. Leaf and Yard waste: Have a compost facility where residents bring their own. One leaf pick up in late November and one xmas tree pickup in January.
  - d. Xmas trees: Collected at curbside, one week in January
  - e. C&D: Any small amounts that fit into a bag or under the limit of 3 bags and one bulky item per week is OK. Beyond that, residents are told to rent a dumpster.

### Worcester's PAYT System

Population: 172,000, Trash collection: curbside  
 Households served: Approx. 50,000, Recycling collection: curbside weekly  
 PAYT System: \$1.00/30-gal bag, \$0.50/15-gallon bag  
 Contact: Robert Fiore, 508-799-1430, [fiorer@ci.worcester.ma.us](mailto:fiorer@ci.worcester.ma.us)

1. What is the basic program?

- a. Bags or tags? - Small and large bags
- b. Cost? Residents buy bags at \$1 per 30-gallon bags, \$.50 per 15-gallon bags.
- c. Barrels allowed? Yes but need to use City bag inside barrels.
- d. Flat fee per household? No
- e. Number of Items given out "free" or funded by tax revenue? None

2. Average number of bags sold: 2.923 million 30-g bags and 1.942 million 15-g bags = 77.8 30-g equivalent bags sold per hh per year or about 1.5 bags per week per hh

3. Tons of waste generated: 29,300 TPY in FY02 or 22.5 lbs/hh/wk or 15 lbs per bag/week. Prior to PAYT, the SW generated was 39,000 TPY, now 29,300 TPY!

4. Tons of recyclables: The day we started PAYT is the day we started curbside recycling collection. Prior to that we had drop-off recycling. The recycling rate was approx 40+% !!!! It leveled off to the mid-30's and now has averaged in the high 20's.

		Paper	Co-mingled	Total
	Feb	594.27	239.02	833.29
	Mar	660.31	238.16	898.47
	Apr	592.01	196.78	788.79
	May	705.51	219.59	925.10
	Jun	866.58	259.34	1,125.92
	Jul	704.68	245.84	950.52
	Aug	623.15	216.17	839.32
	Sep	616.77	194.33	811.10
	Oct	667.61	222.31	889.92
	Nov	706.78	224.97	931.75
	Dec	632.31	229.99	862.30
2001	Jan	599.24	242.16	841.40
	Feb	488.89	198.53	687.42
	Mar	572.12	231.55	803.67
	Apr	591.06	231.85	822.91
	May	623.31	230.99	854.30
	Jun	560.05	210.16	770.21
	Jul	525.96	216.57	742.53

2002	Aug	556.70	238.14	794.84
	Sep	534.46	198.55	733.01
	Oct	627.10	221.85	848.95
	Nov	646.08	225.53	871.61
	Dec	594.86	209.78	804.64
	Jan	601.55	243.77	845.32
	Feb	498.95	198.39	697.34
	Mar	562.92	208.38	771.30
	Apr	590.00	224.34	814.34
	May	615.86	222.68	838.54
	Jun	571.42	208.22	779.64
	Jul	552.38	223.55	775.93
Aug	496.83	194.55	691.38	
Sep	569.66	213.01	782.67	
Oct	624.34	226.95	851.29	
Nov	623.14	221.42	844.56	
Dec	602.08	234.13	836.21	

5. How are bags distributed? Do the stores get a discount off the price? Sold thru 130 different stores, large and small, in the City and outside also. Includes CVS, Price Chopper), Big Y, Super Stop & Shop, White Hen Pantry, neighborhood (corner) stores, etc..Nyman Paper Company supply's and delivers the bags to the retailers, as they are ordered. They send the bill for the wholesale cost to the City who then bills the retailers for the retail cost. The retailers do not get a discount or mark-up on the bags. At first, the large chains were not interested in selling bags so the City sold only thru small retailers. After the first year, the large chains joined in also. The large chain stores initially preferred stickers to bags but the City had already embarked on ordering bags. After pressure from environmental groups the chain stores got on board and starting offering the bags.

6. Who prints bags and at what cost? Who delivers? Nyman Paper Company is a distributor that arranged to have the bags produced by a bag manufacturer and makes the deliveries.

7. Have you Changed prices over time? Started out charging \$.25 and \$.50 per bag now the price has doubled. It was a hassle to change the price due to the stock in place. They had to change the sleeve color and UPC codes and publicize the new prices to the public and make sure retailers were not charging the new price for the old bags and pocketing the profit. At first, there was a run on the old cheaper bags.

8. Who handles the administration, distribution, and accounting and how is it done? Bob Fiore handles most of the logistics and problems. There are 4 health inspectors that were originally hired into DPW but then transferred to Health and Code Div and now that number is being reduced because they have been doing other work than PAYT inspections. The inspectors have the ability to issue tickets for illegally dumped trash using a progressive fine system. Example,

first offense is a warning, additional violations are \$25, \$50 and \$100 tickets. The City told businesses to keep dumpsters locked and use a common key. They said businesses should call them if they found any illegal dumping. The CVS's and supermarkets still get some stray trash but not enough that they have bothered to call. Illegal dumping did not turn out to be a major problem. Illegal dumping was always the large items like furniture, appliances, etc. not trash bags.

9. How much time does it take? A majority of Bob's time plus some of the inspectors' time. At the start of the program, in November 1993, they had the DPW engineers available during a slack time of year and during the first weeks had them out inspecting the trash routes each day. If trash was in improper bags, it would be labeled with a violation notice. They would note the address and return within 24-hours. If the trash had not been properly bagged, it would be collected by the City staff. They would knock on doors of the residence and inform them of the PAYT requirements and warn them of future fines. The City did not allow bags to stay on the curb more than 24-hours. If they found a second offense they could issue a fine or another warning. They have had a 99.9% compliance rate for most of the program history.

10. Who handles complaints, questions, tickets? The DPW has a customer service center and the reps can answer questions on recycling and waste disposal. Most of the fines that were issued by the inspectors were level one fines (warnings). Rarely did they issue level two and above fines (\$25, \$50 or \$100). When they did, the fines are brought to housing court (non-criminal disposition) where the housing supervisors go for other issues such as code violations etc.

11. How long had the program been in place and what cause the change to PAYT? PAYT started November 1993. PAYT began in response to a fiscal crisis that the City was having.

12. Did the Town need to change its recycling program (weekly recycling?) Changed from drop-off to curbside recycling collection at the same time. Also, recycling was initially bi-weekly and changed to weekly in 1996. As for City Depts, the Fire Dept had to pay for its own trash so buys bags. The City Police Dept also pays its own way but chose to hire a private hauler. The DPW doesn't collect from schools. Since they need dumpster collection and are very restrictive on when you can collect, they've always gone their own way.

13. How many residents use private haulers? At what cost? MF over 6 units or other complexes with dumpsters use private haulers.

14. Did you encounter any increase in illegal dumping with PAYT? Not a major problem, the City instituted a curbside bulk waste pickup program when PAYT began.

15. What does the Town tell residents to do with:

- a. White goods, metals, CRTs: curbside program, drop-off program or they can contact a private hauler.
- b. Yard waste, xmas trees: The City operates three yard waste drop-off sites open from April through November and for Christmas trees in January.
- c. HHW: Take to drop-off or events and the City recently constructed a permanent HHW facility.

### **Concord's PAYT System**

Population: 17,000 Trash collection: curbside  
Households served: 3,000 Recycling: curbside  
PAYT system: \$1.50/sticker, none "free"  
Contact(s): Ann Dorfman, [adorfman@concordnet.org](mailto:adorfman@concordnet.org) 978-318-3241

1. What is the basic program?
  - a. Stickers and six month barrel sticker
  - b. Price: \$1.50/sticker and \$39.00 six-month sticker (exactly the same per week as the tags)
  - c. Barrels allowed? Bags or barrels are accepted. Either container requires one tag (or barrel sticker). Residents can put a tag on one bag and not use a barrel, or can put multiple bags in a 34-gallon barrel and put one tag on the barrel. The resident gets to choose how they want to do it. Either way costs the same.
  - d. Flat fee per household? \$108/year billed every 6 months.
  - e. Number of Items given out "free" or funded by tax revenue? none
2. Average number of stickers sold/y: FY02 175,913 disposal units, 1.2 disposal units per household per week.
3. Tons of waste generated/y: FY02 2,267 tons, or 25.7 lbs per sticker
4. Tons of recyclables/y: FY02 1,464 T paper, 438 T commingled 46% (not including yard waste)
5. How are stickers distributed? Town House and seven retail outlets sell tags. Distributors receive 5% commission.
6. Who prints stickers and at what cost? Who delivers? Weekly tags – Resourceful Bag and Tag 800-8723-8241. Printed on both sides. They cost a little over \$2,395 for 100,000 stickers (\$0.02395 per sticker). Six-month barrel stickers 14" x 3.5", printed on both sides – Ryden Decal 800-448-1991 \$850 for 1,500 (\$.56 each).
7. Have you Changed prices over time? 1998 increased from \$1.00 to \$1.50. Subscription free 1998 decreased from \$120/year to \$102/year, 2002 increased to \$108/year.
8. Who handles the administration, distribution, and accounting and how is it done? Accountant does the billing of the flat fee. Residents subscribe through the Treasurer's Office. Treasurer's office does twice yearly billing. Public Works does everything else, such as designing invoice and inserts, work with the hauler to discontinue service of unpaid subscribers.
9. How much time does it take? \$40,000 contributed from the Enterprise Fund for Accountant time. Additional fulltime coordinator plus ....Close to \$100,000 goes to the town from the enterprise fund, this covers all sorts of vague costs, Town Manager budget, Treasurer's office, etc. I can give you details if you want.

10. Who handles complaints? Ann Dorfman and DPW administration staff.
  11. How long had the program been in place and what cause the change to PAYT? Landfill closed 1993. Chose to implement PAYT curbside program at that time.
  12. Did the Town need to change its recycling program (add another truck, weekly recycling?) There was no municipal curbside program prior to PAYT
  13. How many residents use private haulers? At what cost? 3,000 use municipal program and about 1,800 have private hauler. Many with private haulers have back door or garage pickup, a service the town does not provide. Prices are all more expensive. I don't know why some with curbside pickup don't sign up for the town program, ignorance perhaps? See attached.
  14. Did you encounter any increase in illegal dumping with PAYT? We experience illegal dumping in public barrels and private dumpsters on a regular and ongoing basis. I highly recommend 1) Bylaw to allow tickets for illegal disposal (see attached) but fines should be higher than ours are. 2). Produce and place illegal disposal notice decals on doors of all private and municipal dumpsters in town to remind scofflaws that illegal disposal is illegal. We do not experience illegal dumping in parks, rivers, woods, etc.
  15. What does the Town tell residents to do with:
    - a. bulky waste: Drop-off day in May and October or private hauler\*\*
    - b. white goods, CRTs: Drop-off day in May and October or private hauler \*\*
    - c. Leaf and Yard waste: Composting Site open Saturdays 9 – 3 April – Mid-December
    - d. Xmas trees: Composting Site first two Fridays and Saturdays in January. Two charities also pickup at the curb for a \$10 donation and deliver to the composting site.
- \*\* For reasons that are not clear to me, when the program was designed they did not collect bulky waste, white goods, etc. When I began working here we developed the Drop-off day as a way to handle these items. If I were designing the program from scratch I think I would probably include bulk item and appliance pickup into the program.

## Chelmsford, MA

By Barbara Scavesse

The Town of Chelmsford, Massachusetts, instituted a user fee for trash collection in 1990, after voters rejected a tax increase to keep trash and recycling collection in the budget. Voters rejected a similar request for a tax increase in 1991 to keep recycling collection in the budget.

In 1992, residents overwhelmingly voted to eliminate the user fee and raise taxes. Town Meeting had approved a Town by-law that guarantees any tax increase for solid waste services would be used only for solid waste services, multi-family complexes had been added to the solid waste program, the Board of Health had been complaining about illegal dumping and residents were tired of the inconvenience of buying trash tags.

The “Bill and Tag” user fee that was in effect for two years consisted of two parts:

An Annual Bill All single-family homes received an annual bill which covered the fixed costs of the services: administration and curbside trash collection.

The annual bill for trash collection in FY91 was \$74.00 and included 4 trash tags to “jumpstart” the program. Originally meant to be part of the user fee, recycling collection and the fall leaf collections were returned to the tax base as Town provided services for every single-family home, so that people who didn’t use the Town’s trash service could use these other services. (Massachusetts residents cannot be required to pay the user fee and use the Town’s service.)

The annual bill for trash collection in FY92 was \$80,00. Due to the voter’s rejection of a tax increase for recycling collection, this voluntary service was listed as a separate item on the annual bill for the cost of \$30.00. Residents could elect to use either trash or recycling collection or both. Residents who paid the recycling user fee received a large tag to be attached to the side of their recycling bin. Only those bins with the recycling tag attached were collected.

A Tag Fee Residents purchased sticky tags and attached one to each regular trash item put out for collection, to pay for the disposal of the trash the tags was attached to. The tag was thrown away with the trash, and items not tagged were not collected. Tags were applied only to the regular trash, and not to recyclables or leaves put out for the special fall leaf collections.

Tags cost \$1.00 each during the first year of the program, and \$1.15 during the second year. Tags were available at several local stores, the Town Offices and by mail order (mail order was discontinued the second year). Trash tag vendors received 5% of the tag fee. Tags were chosen over bags because of limited storage space at the Town Offices and at stores, they were easy to

handle and deliver to the stores, and they were easy to mail. The disadvantage of tags is that they don't limit the amount of trash that can be placed in a trash can, while a bag is self limiting.

Bulk items (any item that weighs over 80 pounds or is a shape that cannot be picked up by one person) required a special bulk tag. Bulk items were collected four times a year. The cost of the bulk tag was \$7.00, and was intended to cover the cost of collection as well as disposal. However, the bulk tag fee was insufficient and this service was discontinued during the second year of the user fee program. Residents then made private arrangements for bulk collection.

## RESULTS OF FEE

During the first year of the program, roughly 80% of the 8,800 eligible households participated in the trash program. During the second year, about 82% participated in the trash program and almost 60% of the eligible households participated in the recycling program.

The trash user fee encouraged recycling, while the recycling user fee implemented the second year discouraged recycling. Residents became very creative in reducing their trash, in both acceptable and unacceptable ways. Many became more careful in their purchases, and began composting their yard waste and even some kitchen waste. Many also increased their use of garbage disposals and trash compactors, which reduce the need for trash tags but didn't reduce the disposal problem. Some residents resorted to burning trash in their fireplaces, not only an unhealthy practice but also unpleasant for their neighbors. Unfortunately, a small handful dumped their trash in business and condominium dumpsters or in the back woods. The net result was that the amount of trash that was collected during the first year of the program dropped to 65% of what had been previously collected.

## PROBLEMS

As mentioned, illegal dumping was a minor problem resulting from the user fee. There was no increase in staffing to handle complaints, which would have been helpful, and is advisable to any municipality considering a trash user fee.

Approximately 3% of the residents did not pay the annual trash fee nor did they submit documentation they were using an alternate service (as required by town by-law).

Initially, the tags didn't stick when they were attached at freezing temperatures, although they did stick when attached at room temperature and taken outside a few minutes later. The bid specifications were modified to say that tags must be able to stick when attached to the trash at below freezing temperatures.

The biggest problem with the trash user fee was its effect on the financing of the recycling program. The Town's budget no longer avoided trash disposal costs through recycling, therefore



the Town no longer had a financial incentive to maintain the recycling program within the tax base. If recycling was discontinued and people produced more trash, they could just buy more trash tags. In addition, several vocal town leaders insisted that the trash user fee could not subsidize the recycling program. The recycling user fee that resulted from the rejection by the voters for a tax increase must pay for the recycling program in its entirety. With the implementation of the recycling user fee, recycling participation dropped from roughly 85% of eligible residents to almost 60%.

## EFFECT OF USER FEE ON REQUEST FOR BIDS

When the user fee went into effect, the Town was paying a flat fee for the town-wide collection of trash and recyclables, and a per ton charge for the disposal of trash. (Chelmsford does not have a contract with a disposal site.) As a result of the user fee, the recent request for bids asked for a per household charge for trash and recycling collection. If the user fee had continued, the Town would have paid only for those households, which participated in either of the programs. Thus the financial risk to the Town was reduced.

The Town also requested a flat fee for the town-wide collection of trash and recyclables, in case the tax increase was approved. The Town continued the request for a per ton disposal charge.

## LESSONS LEARNED

Solid waste management needs to be considered as an integrated program on recycling, composting and waste disposal. When any component of the program must be self supporting through a user fee, that component faces potential elimination if insufficient funds are collected. This is what happened to Chelmsford's bulk collection program. The recycling program also came very close to being eliminated because of the doubt that sufficient funds could be collected.

## RECOMMENDATIONS

If a community is going to adopt a user fee, I would recommend one in which residents pay for each item they throw away through the use of tags or bags, to pay for trash disposal costs. (Paying by weight would be even better when disposal charges are based on weight.) Although Chelmsford residents grumbled about the user fee, they did think paying for what they threw away was fair.

I would also recommend that the collection costs remain as part of the tax base so that every resident could use any of the programs they choose. If this is not possible, then I recommend a flat bill for the collection costs. Check with legal counsel to determine if your contract(s) will allow for every component of your integrated solid waste program to be included as one item on the bill. To reduce financial risk, structure your next contract so that your community is charged only for those residents who participate in the program. Guarantee a minimum number of

participants to the contractor to reduce his financial risk. Have the contractor collect the annual bill, if possible.

Tags or bags should be widely available for the convenience of residents. Tags or bags must be stored in a secure location such as a vault. The tags used by Chelmsford were serialized for inventory control.

When preparing the solid waste budget, consideration should be given to those who cannot afford a user fee. Consideration should also be given to the department which enforces illegal dumping laws. This department must have sufficient resources to handle an increase in illegal dumping. Problems will arise with a solid waste user fee but they can be managed. Fees can easily be adjusted up or down depending on the current economic conditions. A user fee in which residents pay for each item they throw away is regarded as fair by the users and encourages trash reduction.

### **North Reading's PAYT System (ended)**

Population: 13,000                      Trash collection: curbside  
Households served: 4000+              Recycling: curbside (was drop-off )  
PAYT system: \$0.65/large bag, none "free"  
Contact(s): Dave Hanlon, DPW Director

1. What was the basic program?
  - a. Stickers - \$0.65/sticker
  - b. Barrels allowed? Yes but people would complain about stickers "falling off", especially on rainy or snowy days.
  - c. Flat fee per household? For FY03, they implemented a flat fee of \$180/hh and dropped PAYT and at the same time changed to curbside recycling collection.
  - d. Number of Items given out "free"? None, but adopted a low-income provision tied to the discount policies in the assessor's office. They get 5-7% delinquencies per year which get added to a resident's tax bill as a lien and then those get paid.
2. Average number of stickers sold/y: About \$750,000 per year, which remained fairly stable each year.
3. Tons of waste generated/y: they had been under their 5246 TPY GAT for many years until recently. In the last year, after dropping PAYT, their tonnage increased by 750 TPY and seems to be continuing at the same level so far this year. FY03 tonnage was 5139TPY.
4. Tons of recyclables/y: When they offered curbside recycling collection, their recyclables tonnage increased.
5. How were stickers distributed? At 6 stores including Shaw's Stop & Shop, and Town Hall.
6. Who printed stickers and at what cost? Who delivered? The stores would come to Town Hall to buy them.
7. Have you Changed prices over time? In 1989, North Reading started curbside collection of trash. To offset the new cost for this service, they started charging \$0.65/sticker. The contractor costs and disposal costs increased every year. Every 2-3 years, the DPW recommended increasing the sticker price but the Selectmen would never approve an increase. In 1991, North Reading opened a recycling drop-off center, which reduced their trash tonnage below their GAT. The Selectmen "did not want to hear about anything related to trash or related to NESWC" (due to frustration with the NESWC contract). As a result, the costs increased but the revenues didn't. Two years ago, there was a \$750,000 budget deficit. The DPW proposed increasing the sticker fee to \$2.00 or \$2.25 or shifting to a flat fee-based program at a cost of \$150/hh/year. The Selectmen decided they could offer curbside recycling at an additional \$30/yr cost and get a dependable source of revenue, so opted for a \$180/hh/yr flat fee. BFI had been consulted

and commented that trash “would disappear” if they increased the sticker fee, suggesting that they’d see more illegal dumping.

8. Who handles the administration, distribution, and accounting and how is it done?
9. How much time does it take?
10. Who handles complaints?
11. How long had the program been in place and what cause the change to PAYT? See above.
12. Did the Town need to change its recycling program (add another truck, weekly recycling?) The curbside collection program cost the town about \$120,000 per year (4000 hhs x \$30/y).
13. How many residents use private haulers? At what cost? Residents are allowed to “opt out” of the fee if they can prove they have a legal alternative means of disposal.
14. Did you encounter any increase in illegal dumping with PAYT? They had problems with illegal dumping at school dumpsters and alleys. No longer a problem after the end of PAYT.
15. What does the Town tell residents to do with:
  - a. bulky waste: \_\_\_\_
  - b. white goods, CRTs: \_\_\_\_
  - c. Leaf and Yard waste: \_\_\_\_
  - d. Xmas trees: \_\_\_\_

## Appendix C      **Collected data about PAYT systems in other towns**

This appendix provides summaries of the pay-as-you-throw programs and experiences of several towns which were not directly interviewed by the Study Group. A series of basic questions were developed for these interviews, and the responses to these questions are transcribed for each town:

- Boxford
- Brockton
- Holliston
- Medway
- Milton
- Taunton
- Topsfield

### **Boxford's PAYT System**

Population:	8251	Trash collection:	curbside
Households served:	2200	Recycling:	curbside
PAYT system:	\$2.00/sticker, none "free"		
Contact(s):	Karen Sheridan, <a href="mailto:sheridankj@aol.com">sheridankj@aol.com</a>		

1. What is the basic program?
  - a. Stickers
  - b. \$2 per 32-lb sticker, previously was \$1/sticker
  - c. Barrels allowed? yes
  - d. Flat fee per household? No
  - e. Number of Items given out "free" or funded by tax revenue? none
2. Average number of stickers sold:  
120,000 per year = about 55 per household (2200) that do not use subscription service.
3. Tons of waste generated:  
1687 from 2301 hhs (100 of which are in a senior citizens complex) so really only 2201 hhs use bags. Using  $1687 * (2201 / 2301) = 1614 \text{ tpy} * 2000 / 120,000 \text{ bags/yr} = 27 \text{ lbs / bag}$ .
4. Tons of recyclables:  
Curbside recycling tonnage for 2428 households is 987 tons (mixed paper, glass, alum, plastics). At drop-off we collect 45 tons of OCC 68 scrap metal.
5. How are stickers distributed?  
We do not mail out stickers, as that would be like sending cash through the mail. Stickers are sold at Town Hall (32,500), 2 libraries (33,000) and the 2 retail general stores in town (54,500).
6. Who prints stickers and at what cost? Who delivers?  
We have stickers printed at Northeast Quality Products in Newburyport. We don't change (the color) the stickers unless we raise the sticker price. So we continue to use the same stickers.
7. Have you changed prices over time?  
Previously stickers cost \$1. Also some Town leaders want to place the total cost of waste & recycling collection on the sticker price. About 1/3 of the price is in the tax base at this point. I think people have reached their limit in wanting to pay any more for stickers. Whenever we raise the price of the stickers, more households go to the subscription service and more residents "cheat" the system.
8. Who handles the administration, distribution, and accounting and how is it done?  
Most of the logistics are managed by the Office of the Treasurer. The stickers are ordered by the Selectmen's Office and delivered to the Treasurer's Office where they are stored. Libraries are issued one roll at a time and the turnover is made to the Treasurer after all are sold. The stores are issued one roll at a time on credit, payment is made to Treasurer when stickers are sold and a new roll is issued. Cost per roll is \$1000 (500 stickers @\$2) but stores pay \$975 a roll. The Treasurer's Office maintains forms to be signed whenever a library or store employee is issued a roll of stickers. A transaction log is maintained noting the serial numbers of stickers on each roll, date of issue and date of payment. On

June 30th, at the end of the fiscal year, all accounts are balanced out (all cash turned in along with unsold stickers, partial rolls are reissued.)

9. How much time does it take?

Senior Citizens on the Tax Work-Off Program are employed at Town Hall 2.5 hours per day to sell stickers. The balance of the time, stickers are sold by the Treasurer's Office. Approximate time is 1hr/day for clerk.

10. Who handles complaints?

Complaints are handled by the BOH who is in charge of the curbside waste and recycling contract.

11. How long had the program been in place and what caused the change to PAYT?

Our program has been in place for 11 and 1/2 years. Only change has been the increasing cost of the stickers from initial 35 cents per bag to present \$2/bag. Waste disposal also changed from using our town landfill to being hauled to a combustion plant. We changed over to PAYT when the town changed from drop-off your own trash to curbside trash and recycling. The town had no contracted curbside service before PAYT. Residents perceived that they paid nothing for trash before PAYT. But the first year the sticker was only 35 cents and they got a brand new service--curbside pick-up.

12. Did the Town need to change its recycling program (add another truck, weekly recycling?)

The change in recycling was astonishing. Going from drop-off to curbside at least doubled the tonnage of recycling. Evidence of source reduction is hard to estimate as tonnage of waste was truly an estimate until our landfill closed several years ago and waste was hauled to combustion plant & weighed.

13. How many residents use private haulers? At what cost?

About 10% of the residents use private subscription haulers. (5% are individual households who use a private hauler, 5% is a senior citizen housing project that contracts directly with our same waste hauler). Prior to PAYT we had only private subscription haulers who hauled to our town dump; but most residents hauled their own trash to our town dump. When the town went to curbside trash and recycling we no longer allowed private subscription haulers to dump in our landfill, only the waste hauler the Town contracted with was allowed to dispose of waste in the town landfill. The only hauler requirement is that private haulers must register with the Board of Health each year. There is only one private subscription service in town. Mello charges \$30/month for curbside trash or \$40/month to come in the driveway to the garage. Any amount of household trash or large bulky items is allowed. This amount is \$360/yr compared to \$104 if household bought 55 \$2 trash stickers per year.

14. Did you encounter any increase in illegal dumping with PAYT?

We have not seen any more or any less problems with illegal dumping with PAYT. There is always some amount of illegal dumping occurring. What we have seen are some residents "cheating" by putting stickers on their barrels not on the top item or placing a bag on top of a barrel or not using stickers at all. Our waste haulers don't seem to notice these discrepancies.

15. What does the Town tell residents to do with:

- a. bulky waste: Boxford has weekly drop-off site for OBW, charge based on size \$10-25
- b. white goods, CRTs, L&YW:
- c. Xmas trees: xmas trees go there also and get chipped up (free).

### **Brockton's PAYT System**

Population:	95,994	Trash collection:	curbside
Households served:	25407	Recycling:	curbside
PAYT system:	\$1.00/34-gal bag, 1 barrel "free"		
Contact(s):	Diane Sullivan ( <a href="mailto:dsullivan@ci.brockton.ma.us">dsullivan@ci.brockton.ma.us</a> ), and Judy 508-580-7135		

1. What is the basic program?
  - a. Bags
  - b. Give away 2 free recycle bins and collect one free barrel/week. For more, residents buy bags at \$1 per 33-gallon bags, in packs of 5.
  - c. Barrels allowed? Residents get one free barrel per week. For multi-family units, they encourage the owner to spray paint #1, #2, #3 if 3-family house. Drivers have sheets that tell how many units at each address, if they need to check. Neighbors report on others, if cheating. Inspectors will take pictures of violations. If BFI leaves a bag, will put a violation tag on it. City workers scan the route the next day and take picture of violation. Send letter first time violate ordinance. Next notice = \$100 fine, then \$300. Spend Tuesday mornings in housing court with those who have received violations and want to contest it but don't lose because they have photos of violations.
  - d. Flat fee per household? \$220 per household (before PAYT was \$110)
  - e. Number of Items given out "free" or funded by tax revenue? Yes, one free barrel per week, no special labeling required plus one free bulky item and free compost collection.
2. Average number of bags sold:  
(City gets \$.25/bag out of dollar/bag) Sept '01 – Aug '02: 626,000 bags (average = 24 bags/hh), Sept '02 – Feb '03 (5 months) 267,000 bags (annualized would be 640,800, also around 24 bags/hh)
3. Tons of waste generated:  
FY01: 37,399 tons; FY02: 28453.36 tons; July '02: 2365; Aug '02: 2279; Sept '02: 2264; Oct '02: 2341, Fy01-Fy02 decrease = 8946 tons (~24% decrease)
4. Tons of recyclables:  
FY01: 387.39 com + 1532.66 tons paper (1850.5 total); FY02: 1074.26 tons com + 3625.07 tons paper (4699.3 total = increase of 2850 tons). Curbside collected yard waste increased also: FY01: 3177.24; FY02: 5733.56; FY03 July 354.5, Aug 230, Sept 388.9, Oct 417.6, Nov 1470. (FY01 vs FY02 increase = 2556.32, 180%)
5. How are bags distributed? Do the stores get a discount off the price?  
Sold through 25 retailers large and small (3 Shaws, CVS, Walmart and small stores pay up front) No tax
6. Who prints bags and at what cost? Who delivers?  
BFI arranges printing and delivery to retailers.
7. Have you changed prices over time?  
Just started
8. Who handles the administration, distribution, and accounting and how is it done?



At start took a lot of everyone's time but now mostly 1 FTE plus supervisor. In addition, they have 4 drivers who check for violations but were doing that before PAYT

9. How much time does it take?

10. Who handles complaints, questions, tickets?

Judy does.

11. How long had the program been in place and what cause the change to PAYT?

PAYT started Oct 2001, tried to start July but delayed in order to hold public hearings first.

12. Did the Town need to change its recycling program (weekly recycling?)

Just needed more trucks doing recycling pickup but BFI switched them from doing trash pickup.

13. How many residents use private haulers? At what cost?

MF over 6 units or other complexes with dumpsters use private haulers.

14. Did you encounter any increase in illegal dumping with PAYT?

15. What does the Town tell residents to do with:

- a. White goods, metals, CRTs: call BFI and schedule appt to collect curbside free
- b. Bulky waste: one free item/wk will be collected curbside
- c. YW: curbside collection every week spring thru Dec plus 2 weeks for xmas trees
- d. Recycling depot: accepts paint, tires (fee), auto batteries, oil, TVs, OCC, clothing, computer parts

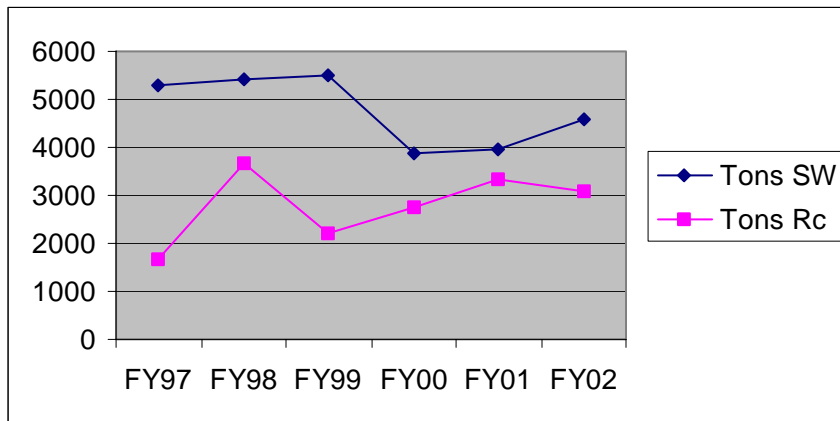
### **Holliston’s PAYT System**

Population: 13,152    Trash collection: curbside  
 Households served: 4400    Recycling: curbside  
 PAYT system: \$2.00/34-gal sticker, 1 barrel “free” (or 52 free stickers for seniors)  
 Contact(s): Andrea Minihan, 508-429-0608

1. What is the basic program?
  - a. Stickers
  - b. \$2 per 34-gallon sticker
  - c. Barrels allowed? yes, can just put sticker on top item.
  - d. Flat fee per household? No
  - e. Number of Items given out “free” or funded by tax revenue? Yes, one free barrel per week, no special labeling
2. Average number of stickers sold:  
 Sold \$83000 at \$2 each annually, sold 93 rolls of 250 each from July 1 2002 to Jan 31, 2003, roughly 40,000 stickers per year = about 9 per household/year
3. Tons of waste generated:  
 FY02 – 4570, FY01 - 3954, FY00 - 3881, FY99 - 5497, FY 98 - 5433, FY97 – 5288.  
 Using  $4570 * 2000 / ((52 + 9) * 4400) = 9140000 \text{ lbs} / 268800 \text{ bags} = 34 \text{ lbs/bag}$
4. Tons of recyclables:  
 FY02 – 3078, FY01, - 3345, FY00 – 2767, FY99 – 2198, FY98 – 3660, FY97 – 1653.  
 The annual variable between FY02 and FY01 is leaf and yard waste.

Start of PAYT

	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>
Tons SW	5288	5433	5497	3881	3954	4570
Tons Rc	1653	3660	2198	2767	3345	3078
% change SW		3%	1%	-29%	2%	16%
% change Rc		121%	-40%	26%	21%	-8%
Tons change SW		145	64	-1616	73	616
Tons change Rc		2007	-1462	569	578	-267
diversion rate	24%	40%	29%	42%	46%	40%



5. How are stickers distributed? Through 4 retailers and town hall
6. Who prints stickers and at what cost? Who delivers?  
Stickers cost 2.5 cents each and are ordered thru treasurer's office. Stores purchase rolls from the Treasurer at \$475 per roll for a roll of 250.
7. Have you Changed prices over time?  
No, but considering it.
8. Who handles the administration, distribution, and accounting and how is it done?  
The Selectman's office does. They had BFI help out in the office for 1<sup>st</sup> two weeks.  
Drivers that find a problem call the office immediately before resident can call to complain so office knows why a bag was left. Met 4-5 times with drivers at start.
9. How much time does it take?
10. Who handles complaints?
11. How long had the program been in place and what cause the change to PAYT?  
2yrs
12. Did the Town need to change its recycling program (add another truck, weekly recycling?)
13. How many residents use private haulers? At what cost?  
Only a few condo complexes, some condominiums use town system
14. Did you encounter any increase in illegal dumping with PAYT?  
They do see increased dumping in town and business dumpsters. They had to get rid of a dumpster and Goodwill box because was attracting illegal dumping over weekends.
15. What does the Town tell residents to do with:
  - a. White goods, metals, CRTs YW: all can be dropped free at Drop-off site
  - b. Bulky waste will be collected curbside if they call BFI (but considering charging)

### **Medway's PAYT System**

Population:	12100	Trash collection:	curbside
Households served:	3880	Recycling:	curbside
PAYT system:	\$.75/small bag, \$1.50/large bag, 5 free bags first year only Flat fee going up from \$60/yr to \$120/yr.		

Contact(s): Bill Fisher, Health Agent, 508-533-3206

1. Buy bags from Boxes and Bags, sell through 6-7 retailers. Retailers order from the town, town relays order to B&B, towns gets invoiced then bills the store. Stores make \$.05/bag.
2. Average number of stickers sold 166,000 large bags and 30,000 small bags per year about 47 per household per year.
3. B&B holds inventory and will ship by the pallet (at no added charge) or by the box (via UPS and store pays the UPS charge).
4. Separately bill PAYT fee but considering merging it with other town bills sent out.
5. Complaints are handled by the hauler or BOH who is in charge of the curbside waste and recycling contract. If a stray bag shows up in someone's yard, the resident has to figure out who's it is.
6. Started recently (2 years ago?)
- 7.
8. Boxes and Bags produces their bags.
9. Few the residents use private subscription haulers because still more expensive
10. To get it passed, took a ballot vote. Got 80% support because more equitable approach and good for seniors who leave during the winter.
11. The change in recycling was significant, now at 60% recycled. SW tonnage dropped 80-100 tons/month to 260-325 per month.
12. We have not seen any more or any fewer problems with illegal dumping with PAYT.  
Also some Town leaders want to place the total cost of waste & recycling collection on the sticker price. About 1/3 of the price is in the tax base at this point. I think people have reached their limit in wanting to pay any more for stickers. Whenever we raise the price of the stickers, more households go to the subscription service and more residents "cheat" the system.

### Milton's PAYT System

Population:	25,803	Trash collection:	curbside
Households served:	9280	Recycling:	curbside
PAYT system:	\$2.00/34-gal sticker, none "free"		
Contact(s):	Branch Lane, 617-696-5729 or Kathy O'Donnell, 617-696-5732		

1. What is the basic program?
  - a. Stickers
  - b. \$2 per 34-gallon sticker
  - c. Barrels allowed? yes, can just put sticker on top item.
  - d. Flat fee per household? No
  - e. Number of Items given out "free" or funded by tax revenue? no (At first hand-delivered 52 free stickers over the course of two weeks. Did this for the first few years. When closed landfill and cost increased, made people pay for all the stickers.)
2. Average number of stickers sold:

\$74,298 from \$2 stickers sold by town, 628,965 sold by retailers at \$180/sticker revenue to the town (retailers get \$.20/sticker) and \$30,000 came in from annual barrel stickers sold on a prorated basis of \$2/week left in the year. In addition, they sold 110 \$15 stickers for bulky waste.
3. Tons of waste generated:

about 5600 tons per year
4. Tons of recyclables:
5. How are stickers distributed?

Through 12 retailers who are charged \$1.80/sticker but add \$.20/sticker so residents pay \$2/sticker. Some on cash basis, others billed. Stickers are pre-numbered, or can buy a barrel sticker good for 52 wks = \$104, purchased at town office only or can be mailed if send check. Hauler won't pick up trash if sticker expires.
6. Who prints stickers and at what cost? Who delivers?

Buy stickers from NE Quality Products. Pay \$14.25 per 1000. Town delivers to retailers once a week. DPW delivers to stores, picks up cash, deposits.
7. Have you Changed prices over time?
8. Who handles the administration, distribution, and accounting and how is it done?

They have one clerk FT and one field person. Not an enterprise but credited to DPW offsetting about 50% of costs. Treasurer does inventory check most months, deposit cash w. treasurer daily, sell bins, and compost bins Consignment did not work; too time consuming.
9. How much time does it take?

2 FTE
10. Who handles complaints?

When a missed house, hauler goes back. A field person drives route each day, puts violation sticker on bags if not stickered properly.
11. How long had the program been in place and what cause the change to PAYT?

Landfill closing in 1991 led to PAYT.
12. Did the Town need to change its recycling program (add another truck, weekly recycling?)

Now have a 53% recycling rate, increased from 28% in 1992.
13. How many residents use private haulers? At what cost?

14. Did you encounter any increase in illegal dumping with PAYT?

15. What does the Town tell residents to do with: ([www.townofmilton.org](http://www.townofmilton.org))

- a. Bulky waste: (anything over 40lbs) requires 3 \$2-stickers – “large item”
- b. Appliances (metal) sold 110 special stickers for OBW at \$15/sticker and 37 \$25 stickers for freon for (AC and frigs) at town hall or by mail after sending a check or bring to RC free (\$10 for freon) (215 people brought freon items to RC)
- c. CRTs:
- d. L&YW: 10-11 wks fall leaf pickup and 4 wks in spring, no drop off
- e. Xmas trees: xmas trees free 1 wk/yr,

### **Taunton's PAYT System**

Population: 51,624 Trash collection: curbside  
Households served: 18,853 Recycling: curbside  
Contact(s): Donna Nascimento, 508-821-1434

1. What is the basic program?
  - a. Bags, single-use stickers, stickers? Stickers
  - b. Cost per bag/tag/sticker? \$1/sticker
  - c. Barrels allowed or required?
  - d. Flat fee per household?
  - e. Number of Items tax-funded ("free")? One free barrel, sticker on handle of 2<sup>nd</sup> barrel or top of bag, one large item per week free, metals can go to drop off, appliances picked up free curbside but have to have appt
  - f. What is the largest size housing unit served? 1-4 family
2. Total No. of stickers sold per year: \_\_\_\_\_
3. Tons of waste generated by residents? \_\_\_\_\_ Tons of recyclables? \_\_\_\_\_
4. How are they distributed?
5. Who prints the bags/single-use stickers/stickers for you and at what cost? Does your supplier stock them and ship on demand? At what cost?  
Packages of \$500, stores pay \$475 per pack. Treasurer's office
6. Have you changed the price any time in the past?  
Was \$.50/sticker for years and July 2002 increased to \$1.00.
7. Who handles the administration, distribution, and accounting and how is it done?  
Enforcement is a real problem. Try to get BFI to go back. May have DPW pick up if needed. Leave a sticker listing violations (too heavy, no sticker, wrong materials). Would prefer bags with none free. Multi-family units make it hard to determine if a barrel is free one or not. Sometimes don't take stickers off. When it snows, people leave a 2<sup>nd</sup> bag but should have had 2 free. Stickers stored in treasurer's office, deliver to stores once a week about 1/2 day. Treasurer's office also sells stickers. They keep an accounting of stickers, kept locked in a safe. Stores are invoiced. Weekly report on outstanding bills is given to treasurer.
8. How much time does it take?
9. Who handles complaints?
10. How long had the PAYT program been in place and what caused the change to PAYT? What was the change in the level of recycling and the change in the solid waste tonnage generated?
11. Did the town need to change its recycling program (add another truck, weekly collection?) after PAYT? If so, at what cost?
12. Did the town add any new services at the same time as changing to PAYT?  
Have weekly recycling
13. How many residents use private subscription haulers? \_\_\_\_\_ At what cost usually? \_\_\_\_\_  
Multi-Family dwelling landlords come to DPW and get permanent barrel stickers for each unit. Condos get once a week collection and have to recycle using wheeled carts or toters. Multi-family charged fee = 35-g/unit -> dumpster, BFI collects from MF. BFI bills for each

one that is doing this. Not all did because required to have recycling if on trash collection. ABC collects recyclables.

14. Did you encounter any additional illegal dumping with PAYT? If so why not? If yes, what did you do about it?

Talk to LeeAnn Travis, TEAM, a volunteer group that do periodic clean-ups. Does not feel PAYT increased illegal dumping. If get a call, DPW will collect and figure out who's it is. Town billed for clean-up. (Th 508-821-1095 or home 508-822-5907)

15. What does the town tell residents to do with:

- a. bulky waste (couches, mattresses, bicycles): one free per week.
- b. white goods: free but by appt.
- c. CRTs: special drop off for a fee (\$5 small, \$10 for large)
- d. leaves and grass clippings: drop off at LF open 7-3 M-F, Sat 7-12, curbside collection 3 weeks/year (Nov Dec and May either the 1<sup>st</sup> or 2<sup>nd</sup> Sat by BFI)
- f. xmas trees: 2<sup>nd</sup> Tuesday in Jan collect curbside



### **Topsfield PAYT Program**

Population:	5728	Trash collection:	curbside
Households served:	2000	Recycling:	curbside
PAYT system:	\$1.50/tag for 40-g bag, one free barrel per week with decal		
Contact(s):	Nancy Carncross (Recycling Coordinator)		

1. What is the basic program?

The cost of our stickers was about .027 cents per sticker (we ordered some in June '02) and for the decals it was .78 cents per decal purchased in 1998.

2. Average number of stickers sold:

Last fiscal year Topsfield sold 48,750 stickers...which makes the average per household around 24 stickers, averaging 28lbs per bag.

3. How are stickers distributed?

Topsfield sells stickers thru local retailers--there are four places which sell the stickers at \$1.50 and they purchase them for \$1.45 each. Retailers are invoiced and have 30 days to pay. One retailer pays upon delivery, another occasionally pays when I deliver them and the others pay within 30 days- mailing checks to town hall. I keep a record of invoices...or a sticker log with invoice number and sticker numbers. I turn in the receipts to town hall listing who from and the sticker numbers. I as well as town hall keep track of the sales.

4. How much time does it take?

I handle the logistics...I pickup the stickers at town hall, prepare the invoice and deliver the stickers to the retailers. I am paid for 5 hours a week, which means 260 hours a year. I don't think I actually spend that much time in a year, also some of my time is for other duties like meetings etc.

5. Who handles complaints?

Complaints by residents are handled by Town Hall employees or sometimes me (when they forward the call to me). We have a system in place in which the hauler is policing the trash. If there is no sticker, they leave the bag with a bright red sticker with a check mark next to the offense. (The sticker has a list of "violations") Waste Management has been extremely good at this...we do not have too many problems. The driver also records the address with the offense and turns in to town hall -- I review and see if there is anything that needs to be followed up on. I believe this sticker system has eliminated a lot of calls to town hall...but they would be the ones to answer that question.

6. Who handles the administration, distribution, and accounting and how is it done?

The decals were distributed at the beginning of the program. That is the only time they will need to be distributed too (unless the program changes). The decals adhere to the barrel, if the barrel gets damaged and a new one is acquired, residents can go to town hall for a replacement. The decals were distributed by mail, the recycling committee put the envelopes together (free labor), the cost when done was covered by a PAYT grant that the town received.

7. How long had the program been in place and what caused the change to PAYT?

PAYT has been in place since November 1998. There have been no changes as of yet. We did not change over to PAYT as part of new contract. It was more in response to our landfill closing and expected increased trash costs.

8. Who prints stickers and at what cost? Who delivers?

The decals and stickers were originally purchased from RE Smith Printing (on state grant). Additional stickers were purchased from them and just recently we purchased another 50000 stickers from Resourceful Bag and Tag at a much better price. The sticker format has stayed the same...though each sticker has its own number on it (used for tracking). So, the stickers are used until they run out.

9. How many residents use private haulers? At what cost?

All our residents use the PAYT system as far as I know. I don't think anyone used private haulers before system...well actually buildings with more than three units are not covered by PAYT and would have their own hauler..that was in place before PAYT too. I believe we enacted a hauler bylaw when the program started.

10. Did the Town need to change its recycling program (add another truck, weekly recycling?)

Recycling increased when we started the program and has remained pretty steady.

11. Did you encounter any increase in illegal dumping with PAYT?

After PAYT there was some increased dumping basically trash bags that people wouldn't pay for. The problem still exists but is not major by any means.

## Appendix D Financial Model

One of the principal tasks of the Study Group was to evaluate the impact of a pay-as-you-throw system on the Town budget. To address this task, the Study Group obtained as much relevant information as possible regarding (a) the current and recent solid waste financial data for Andover, (b) the financial impact experience from other towns adopting PAYT systems, and (c) inputs from Andover staff most likely to be impacted by any PAYT system.

The analysis of this data was aided by a spreadsheet-based financial model, provided to the Study Group by Carolyn Dann. This model attempts to identify each of the incremental expense and revenue changes associated with a PAYT system, and the basic system parameters that affect the magnitudes of these changes. For any assumed set of parameters, the model computes the net cost or savings to the town.

The Excel spreadsheet version of this model is archived along with the Study Group documents, and available through the Town Manager's office.

The material in this appendix reviews the data collected by the Study Group, and describes the parameters and assumptions required to forecast the financial impact on the town budget, and on the total cost to residents. Finally, the financial analysis results are described, using the Study Group's "best estimate" values for each parameter, as well as some attempts at best-case and worst-case excursions.

### **Town of Andover solid waste budget data**

The FY04 Andover town budget includes the following expenses in the solid waste area:

<b><u>Expense item</u></b>	<b><u>FY04 budget</u></b>
Salaries	\$ -
Overtime	\$ 3,500
Advertising	\$ 11,000
Printing	\$ 6,000
Rentals Equipment	\$ 35,000
Solid waste curbside collection contract	\$ 762,150
Solid waste disposal ("tipping") fees	\$ 1,117,850
Recycling: curbside collection contract	\$ 342,000
Recycling: compost monitors	\$ 6,000
Recycling: CRT collection	\$ 25,000
Recycling: Hazardous household waste collection	\$ 55,000
Recycling committee	\$ 1,000
Recycling: Misc. fees and expenses	\$ 1,000
Total	\$ 2,365,500

**Table 1 FY04 Solid Waste Budget<sup>2</sup>**

The solid waste disposal expense is the largest single line item in this budget, and accounts for 47% of the FY04 solid waste budget.

<sup>2</sup> The DPW does not budget any staff specifically for the Solid Waste function, but staff accounted for in other portions of the budget do spend some portion of their time in the management, coordination, and resolution of issues associated with solid waste collection and disposal.

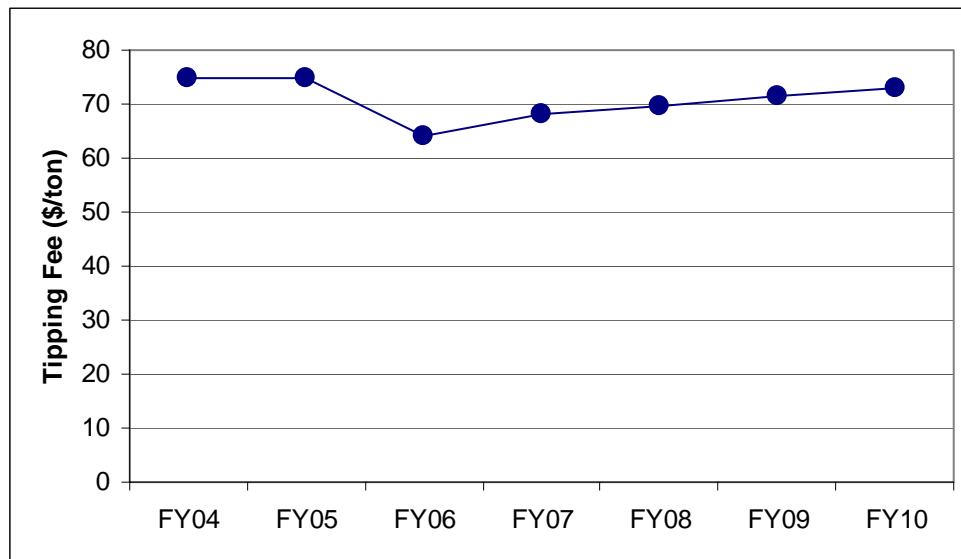
This solid waste disposal expense reflects the annual total of the “tipping fees” charged to the Town for disposal of the trash collected. The fees are computed on a cost-per-ton basis, and the actual expense for disposal therefore depends on both (a) the actual tonnage of solid waste collected throughout the town for disposal, and (b) the current cost-per-ton for disposal.

Cost per ton for solid waste disposal

Andover’s cost per ton for disposal at the Wheelabrator waste-to-energy facility is currently set by a long-standing contract, at a rate of \$143.85 per ton, with a guaranteed annual tonnage (GAT) of 12,304 tons. Through NESWC, Andover has established a Tip Fee Stabilization Fund to defray the cost of disposal. In FY04 the Town will draw \$65 of the \$143.85/ton from the stabilization fund, leaving a net cost of \$78.85/ton to be paid out of tax revenues in FY04. (The town budget document does not explicitly identify the funds withdrawn from the Tip Fee Stabilization Fund, and the FY04 budget above is subsidized by a budgeted \$919,000 withdrawal from this fund).

Andover also enters into brokering negotiations with other towns using the Wheelabrator facility, to share costs for exceeding or undershooting the GAT level. Generally, the resulting cost to Andover is approximately \$75/ton for each ton under or over the GAT level.

Andover has negotiated and executed a new waste disposal contract, which comes into effect in September 2005. Under this new contract, the cost per ton changes to \$64 for the first year. The cost increases yearly thereafter in the following pattern: \$64, \$68, \$69.50, \$71.50, \$73. The variation in tipping fee, as funded through annual operating budget, is illustrated in Figure 1.



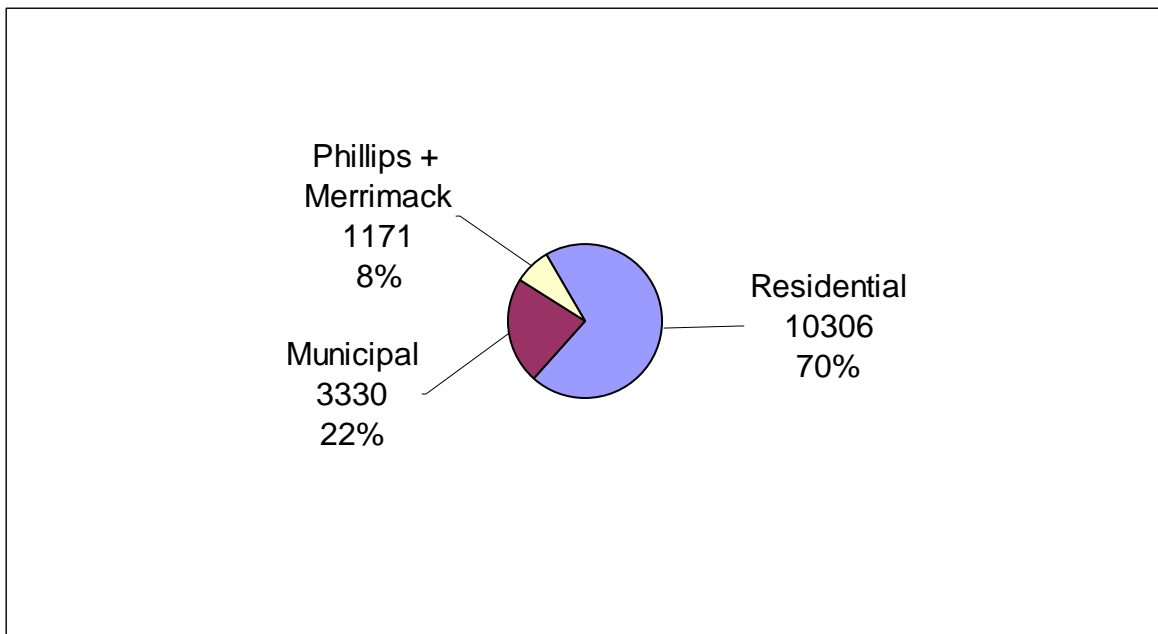
**Figure 1 Tipping fee changes FY04 – FY09**

Solid Waste Mass trend data

The Andover trash collection program services all single- and multi-family dwellings in town, with the exception of multi-family dwellings of eight or more units, and also excepting condominiums. For FY03, the number of households serviced is estimated to be 9,363 based on assessor’s records

as of 1 January 2002. Trash collected from these residential units is merged with the trash collected from dumpsters at town schools, town offices, fire stations, and all other municipal buildings, and delivered to the Wheelabrator North Andover incinerator for weighing and disposal. The Andover budget also includes payment of disposal expenses for solid waste collected from Phillips Academy and from Merrimack College.

The total solid waste stream for Andover in FY03 was 14,807 tons, of which approximately 1171 tons is attributed to Philips Academy and Merrimack College (which reimburse Andover for the cost of disposing of this trash). The Andover DPW estimates that 3330 tons of this waste were collected from schools and municipal buildings, and that the remaining 10,306 tons were collected from residential households. This breakdown of waste mass by source is illustrated in Figure 2.

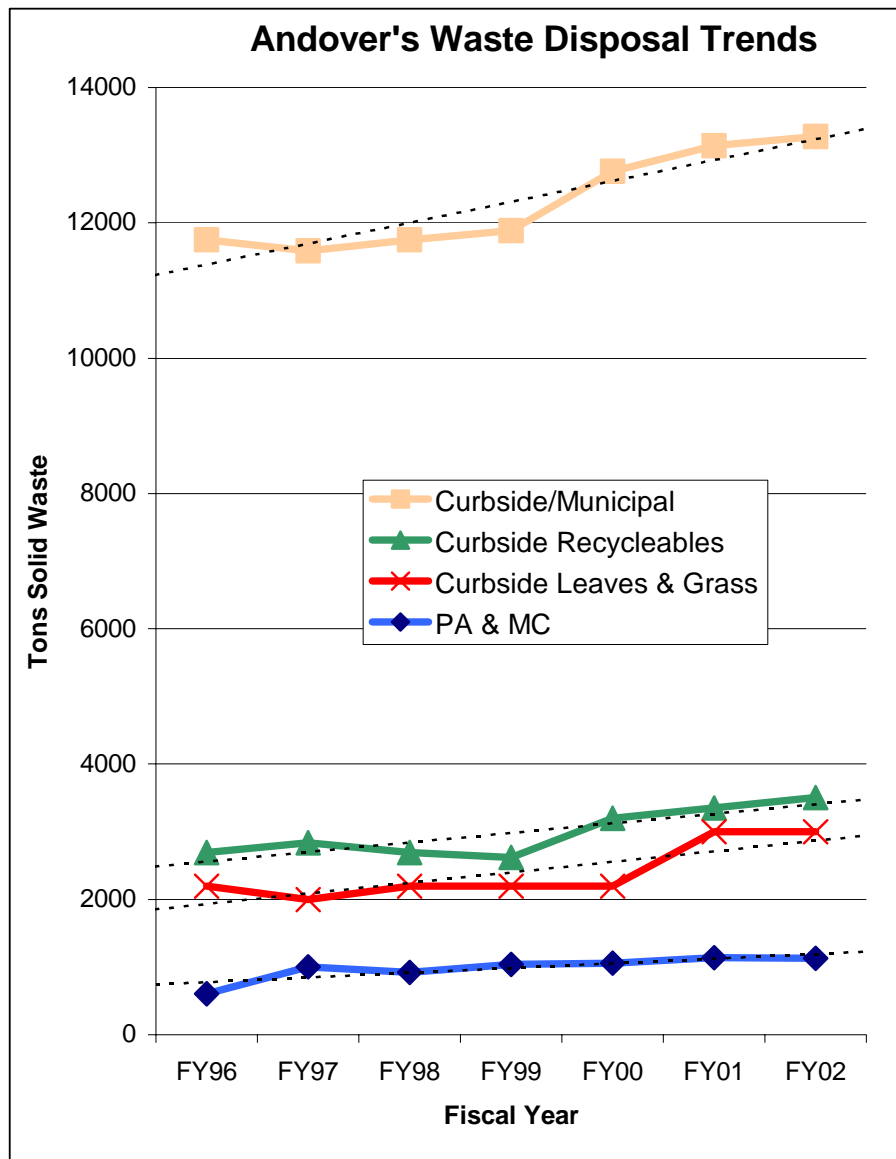


**Figure 2 Solid waste contributions from different sources (FY03 actual)**

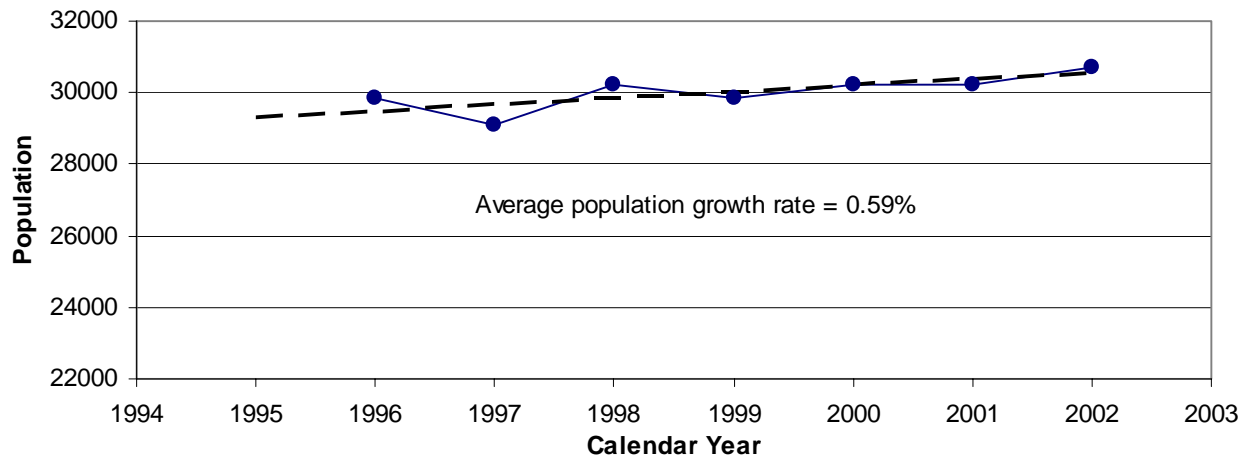
The historical variation in tonnage of trash collected and disposed in recent years is illustrated in 0, along with the best-fit trend lines. This data indicates a 2.8% annual growth in total solid waste tonnage during the period FY96 – FY02. This trend is also echoed in remarks from DPW Director Jack Petkus, who indicates that current budgeting practice is to use a 3% annual increase to estimate future solid waste mass.

During approximately this same period of time, the Andover population grew at an average rate of only 0.59%, as illustrated by the census data shown in Figure 4. This data suggests that the growth in solid waste mass is not a simple reflection of population growth in the town.

To put the tonnage numbers into perspective, consider that the current solid waste collection program in Andover serviced approximately 9,363 households in FY03, collecting an estimated 10,306 tons of solid waste, or approximately 42 pounds per household per weekly collection. This weight of trash is roughly equivalent to 1½ nominal (30-gallon) bags of trash per week.



**Figure 3 Trends in Solid Waste Mass  
(Data from Andover Annual Reports)**



**Figure 4 Population Growth Trend  
(Data from annual town census results)**

**PAYT impact on expenses and revenues**

To forecast the financial effect of implementing pay-as-you-throw, each of the elements of the solid waste budget were examined, to determine what changes might occur. The assumptions and rationale for each element are described below.

Solid waste curbside collection expense

The solid waste curbside collection contract was last rebid in May 2002, and is a three-year contract with two potential additional one-year renewals at the town’s option. The solid waste collection contractor is BFI. They also provide 12 weeks of leaf collection as part of the contracted services. The contract provides these services for a fixed-price each year, with annual cost increases scheduled in, as follows:

Contractor	FY03	FY04	FY05	FY06	FY07
BFI	\$739,955	\$762,150	\$785,000	\$808,570	\$832,825

The Study Group assumed that the introduction of PAYT would not change the annual expense for solid waste collection.

Recycling curbside collection expense

The recycling curbside collection contract was last rebid in May 2002, and is a three-year contract with two potential additional one-year renewals at the town’s option. The recycling collection contractor is WMI. The contract provides these services for a fixed-price each year, with annual cost increases scheduled in, as follows:

Contractor	FY03	FY04	FY05	FY06	FY07
WMI	\$330,000	\$342,000	\$354,000	\$367,000	\$381,000

Since a likely outcome of the PAYT program is a marked increase in recycling volume, it is possible that the recycling hauler will request additional compensation or a renegotiation of the contract. Other towns have had this experience when implementing PAYT. The Andover DPW has indicated that the recycling hauler attempts to keep their trucks quite full, and is expected to be operating close to capacity. A substantial increase in recycling volume could potentially require the addition of another truck to the recycling route.

The Study Group has found it challenging to reliably estimate the increase in recycling collection expense that would occur with a PAYT program. Carolyn Dann has suggested the value of \$75,000/year increase be used, based on the experience of other towns:

- When Natick rebid their recycling collection contract at the start of their PAYT program, the one bid they received was \$100,000 higher than the service provided by the same contractor prior to the PAYT program. This increase was considered too high by the DPW, and was accepted for one year only.
- When Lexington introduced PAYT, they increased the recycling collection frequency from bi-weekly to weekly, resulting in a cost increase of \$50,000 per year. In this case, the recycling and solid waste collections were provided by the same hauler, and hence there was some savings to the solid waste load when the recycling increased.
- Two bids received by Randolph this past spring showed increases of \$105,000 and \$169,000 for shifting from bi-weekly to weekly recycling collection (which is generally considered to be a more expensive change than simply increasing the recycling volume through PAYT).
- The town of Belmont recently asked their solid waste and recycling hauler to estimate the additional cost for recycling collection if PAYT were implemented, and received an estimate of \$55,000.

Dennis Sheehan of the Andover DPW indicated that several years ago the current recycling contractor proposed adding a truck to the town route for an increased expense of \$134,000 per year.

For the analyses below, the Study Group “best estimate” value for this parameter is \$75,000 increase in the annual cost of curbside recycling collection. The worst case increase value will be taken as \$150,000 increase, and the best-case value is \$50,000.

#### Advertising and Printing

The Study Group assumed that these budget line items would probably increase as a result of implementing a PAYT program, to account for additional communication of the program to residents, including outreach programs, publicity and similar activities.

The financial analysis below assumes that this expense is fixed at \$20,000 per year.

#### Rentals Equipment

The Study Group assumed that the Rental Equipments budget line would be unaffected by the introduction of a PAYT program.



### Solid waste salaries

The PAYT program will require some level of increased administrative support, particularly during the first 9 – 12 months of implementation.

Towns that have successfully implemented PAYT have often designated or hired a program coordinator as a point-person. Different towns have different programs as well as different pre-existing staff capabilities. They have each supplemented their existing staff in some way. Some have added part-time personnel for a short time. Others have added full-time staff permanently.

The tasks involved in supporting the PAYT program could include any combination of the following roles:

- Communication with the public (publicity, outreach, answering questions and complaints);
- Communication with the recycling hauler (and overseeing the contract)
- Communication with the solid waste hauler (and overseeing the contract)
- Selling subscription stickers, bags or single-use stickers or mailing out stickers ordered by mail or internet;
- Procuring the bags/single-use stickers and/or stickers;
- Coordinating with retailers;
- Taking enforcement action when required;
- Issuing invoices to retailers;
- Tracking tonnage results and costs;
- Enhancing recycling program options; and
- Coordinating bulky waste program(s).

The financial impact analysis assumes that this expense is \$50,000 per year. This level of funding is a rough estimate, and is not based on any substantial analysis specific to Andover's current staffing or structure. The level of staffing support needed by the program would need to be validated through a detailed examination of the implementation by each department affected. The Study Group was not able to complete this depth of investigation in the limited time period available for this effort.

### Solid waste disposal expense

The expense for disposal of solid waste is determined by the per-ton tipping fee (described above) and the actual tons of solid waste collected for disposal. The current trend in Andover solid waste mass suggests a 3% per year increase in total tonnage can be expected.

If a PAYT program is introduced, one of the primary intended outcomes is a reduction in solid waste mass. The specific magnitude of this reduction is difficult to forecast, and has been seen to vary substantially across the towns surveyed by the Study Group. Data from the surveyed towns and cities in Massachusetts shows that this reduction ranges from 17% to 45% of the total solid waste mass for the town.

The Study Group "best estimate" for this parameter is that a 25% reduction in total solid waste mass will occur after PAYT is implemented. The worst-case value is 15%, and the best-case value is 35%.

### PAYT fee revenues

If a PAYT program is introduced, the town will receive offset revenues from the sale of special trash bags for residential solid waste. The magnitude of this revenue is dependent on several factors, some of which the town has control over, and some which are determined by the behavior of residents.

The sale price for each bag to residents is set by the town, and the Study Group has recommended a range of \$1.50 to \$1.75 per large (30-gallon) bag. For the analyses below, the bag sale price is set at \$1.50.

A 10% “overstock” rate on bags is included in the financial analysis, to cover the expense of excess bags purchased by the town when starting a PAYT program.

The cost of supplying a 30-gallon bag is assumed to be \$0.16, based on recent volume pricing data obtained from the Massachusetts approved trash bag vendor, Bags & Tags. This expense can fluctuate up or down by roughly ½ cent, depending on whether or not Bags & Tags provides the distribution service to the local retail outlets.

A few towns have chosen to allow retailers to purchase bags from the town at a slight discount, to enable the retailers to cover basic overhead costs such as credit card fees. For the analyses below, the “best estimate” and “best case” assumptions are that no discount is offered to retailers, and the worst-case assumption is that a 5% discount is provided to retailers.

The total number of bags sold to residents is estimated by dividing the forecast residential solid waste volume by the assumed average weight per bag.

The average weight per bag is dependent on the capacity of the bag selected by the town, and by the “aggressiveness” of residents to fill bags to their maximum capacity. For the 30-gallon bags recommended by the Study Group, the mass capacity is in the range of 25 – 35 pounds. For the analyses below, the Study Group “best estimate” for average bag weight is 30 pounds, with a worst-case assumption of 35 pounds and a best-case assumption of 25 pounds.

The residential trash mass used for calculating the number of bags sold must be identical to the residential trash mass used in computing the solid waste disposal expense, described above.

### **Financial impact and variation analysis**

The results of the financial analysis for PAYT are summarized in Table 2 below. The first section of the table (lines 1-7) simply restates the assumed parameter values described earlier in this appendix, for the three separate cases of “best case”, “best estimate”, and “worst case”. The total solid waste tonnage is the forecast level for FY05, assuming a 3% annual increase from the FY03 level.

The second section of the table (lines 8 – 14) computes the increases in expenses to the Town if PAYT is implemented for a complete fiscal year. The summary on line 5 shows that under the best-case and best-guess scenarios, the total expenses to the town actually decrease, because the reduction in solid waste disposal more than offsets the increased administration costs.

The third section of the table (lines 16-17) computes the revenues that would be realized from the sale of bags for residential trash use, after subtracting the cost (to the Town) of the bags themselves. The summary on line 18 shows a variation from roughly \$750K to \$850K dollars between the worst and best cases.

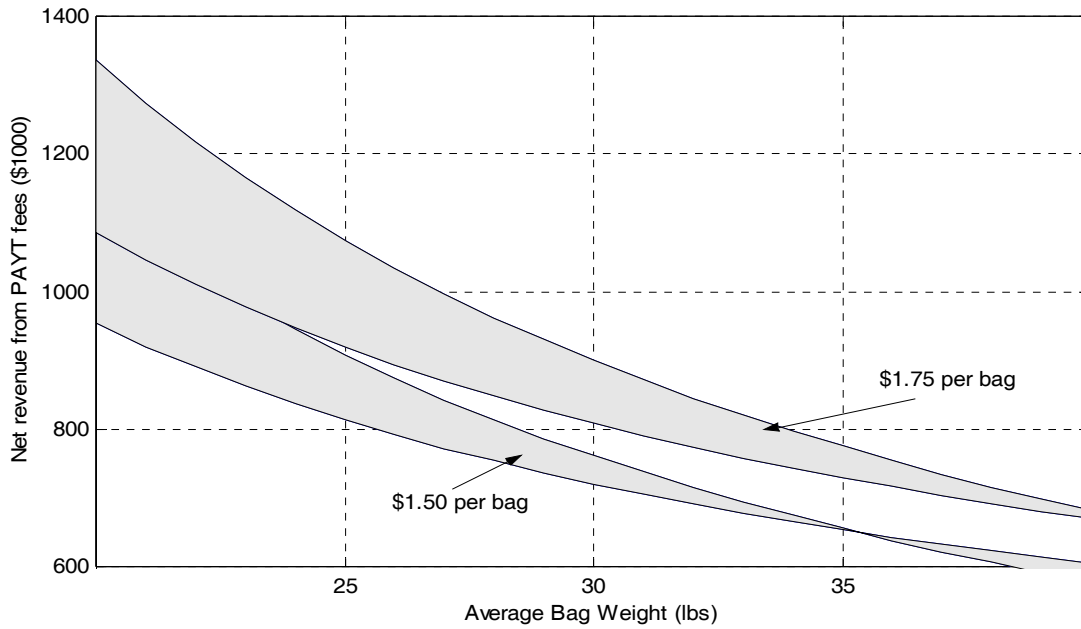
Line 19 calculates the net revenue provided by the PAYT program, i.e., the fee revenues minus all expense increases from the program. Line 20 shows the net revenue result that would be obtained with a pricing of \$1.75 per bag.

Parameters and assumptions	Best case	Best Estimate	Worst Case	
Town solid waste tonnage without PAYT	15,244	15,244	15,244	(1)
Residential waste tonnage without PAYT	10,608	10,608	10,608	(2)
Waste mass reduction	35%	25%	15%	(3)
Residential waste tonnage after PAYT	5,695	7,099	8,502	(4)
Pounds of waste per bag	25	30	35	(5)
Total number of bags sold	455,577	473,234	485,845	(6)
Bag sale price	\$1.50	\$1.50	\$1.50	(7)
<b>Expense increases from PAYT</b>	<b>Best case</b>	<b>Best Estimate</b>	<b>Worst Case</b>	
Salaries & Overtime	\$ 50,000	\$ 50,000	\$ 50,000	(8)
Advertising & Printing	\$ 20,000	\$ 20,000	\$ 20,000	(9)
Rentals Equipment	\$ -	\$ -	\$ -	(10)
Solid waste curbside collection contract	\$ -	\$ -	\$ -	(11)
Solid waste disposal ("tipping") fees	\$ (368,494)	\$ (263,210)	\$ (157,926)	(12)
Recycling: curbside collection contract	\$ 50,000	\$ 75,000	\$ 150,000	(13)
Recycling: other costs	\$ -	\$ -	\$ -	(14)
Total increase (decrease) in expenses	\$ (248,494)	\$ (118,210)	\$ 62,074	(15)
<b>Revenues from PAYT</b>	<b>Best case</b>	<b>Best Estimate</b>	<b>Worst Case</b>	
Total bag fees collected	\$ 683,366	\$ 709,850	\$ 692,329	(16)
Bag procurement expense	\$ (80,182)	\$ (83,289)	\$ (85,509)	(17)
Total revenues (less bag cost)	\$ 603,184	\$ 626,561	\$ 606,821	(18)
<b>Net revenue from PAYT program (\$1.50/bag)</b>	<b>\$ 851,678</b>	<b>\$ 744,771</b>	<b>\$ 544,747</b>	<b>(19)</b>
<b>Net revenue from PAYT program (\$1.75/bag)</b>	<b>\$ 965,573</b>	<b>\$ 863,080</b>	<b>\$ 702,646</b>	<b>(20)</b>

**Table 2 Summary of PAYT financial impact analysis**

The curves shown in Figure 5 indicate the effect of the uncontrolled parameters of bag weight and waste reduction on the net revenue levels. Each of the shaded areas represents the range of net revenue amounts that could be obtained, for waste reduction percentages between 15% and 35%, and the average bag weight shown on the horizontal axis.

This figure illustrates that for the \$1.50 bag pricing, then net revenue is assured to be above roughly \$650,000, assuming that the town-selected trash bags cannot withstand more than 35 pounds of trash. If the bags are typically at least 25 pounds (moderately full), the net revenue range is \$800,000 to \$920,000, depending on the level of waste reduction attained.



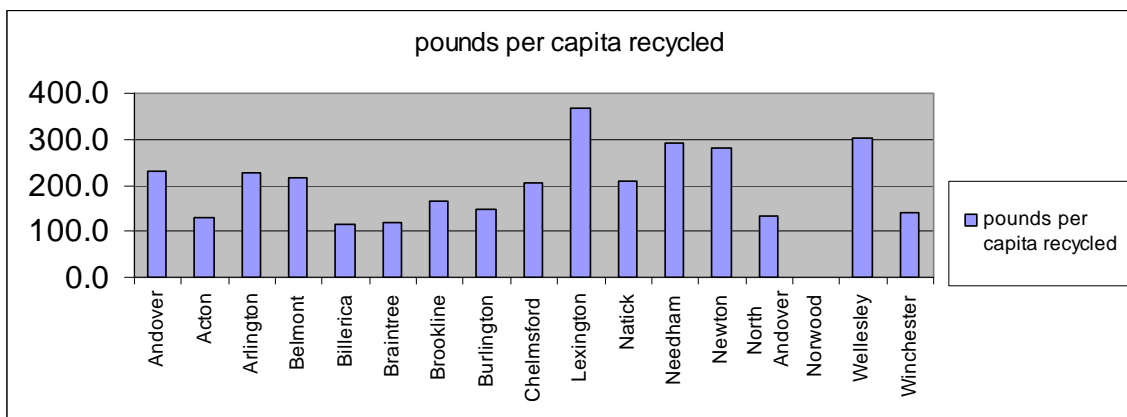
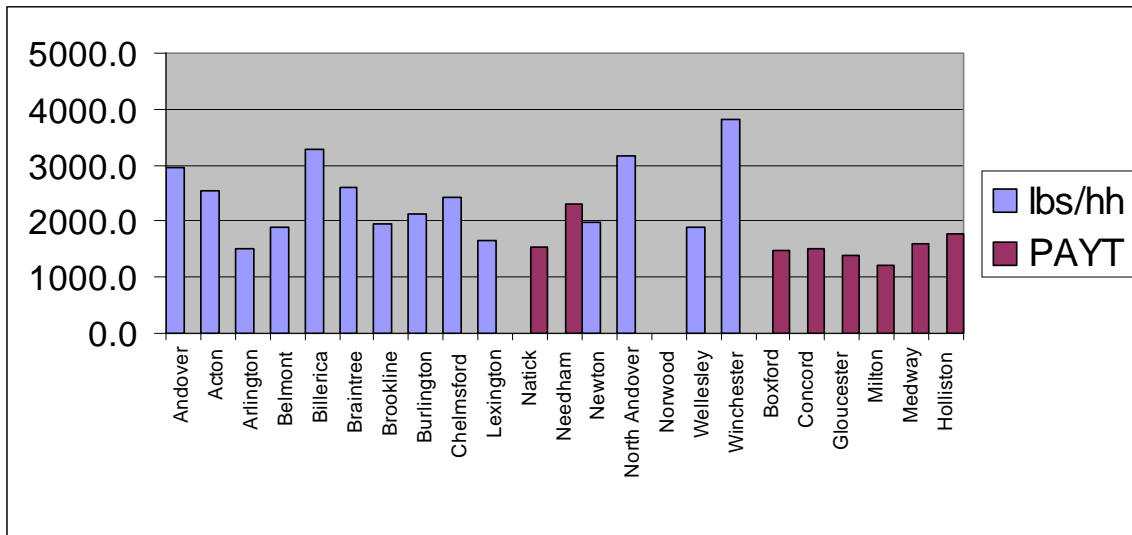
**Figure 5 Net revenue from PAYT**  
 (shaded area indicates 15% - 35% range of waste reduction)

## Appendix E Solid Waste Data for Statistically-Comparable Towns

The Andover Board of Selectmen has established a set of 16 “statistically comparable” towns, to be used for benchmarks. The tables which follow provide a range of solid waste statistics for comparison of Andover with these other towns.

Of particular note are the waste and recycling statistics on a per-household basis, summarized in the graphs below. The upper chart shows the pounds/household of solid waste collected per year, for the 16 comparison towns, as well as for other towns (not on the standard comparison list) that were studied by the PAYT Study Group. Andover is seen to have one of the highest waste disposal levels, and almost double that of most towns using PAYT.

The lower chart shows the pounds/capita recycled per year, for just the 16 comparison towns. Andover is comparable to many of the other towns, and slightly above the median.



<b>Municipality</b>	<b>Andover</b>	<b>Acton</b>	<b>Arlington</b>	<b>Belmont</b>
Contact	, Dennis Sheehan	John Murray	08, Ruth Yannetti	, Peter Castanino
2000 Census	31247	20331	42389	24194
Road miles	222	118	121	82
PAYT?*	considering	no	considering	considering
SW hauler	BFI	Not Applicable	BFI	FWRussell
SW collection contract end date	Jun-05	Not Applicable	Jun-03	Jun-06
Recycling hauler	WMI	Not Applicable	BFI	FWRussell
R collection contract end date	Jun-07	Not Applicable	Jun-03	Jun-06
# hhs served	9300	7495	19500	10211
Units served	1-6	all	all	all
Condos included?	no	yes	yes	yes
# schools	10		11	6
businesses	no		yes	no
# tons SW/yr (res + Muni)	13807	9502	14587.2	9621
lbs/hh	2969.2	2535.6	1496.1	1884.4
disposal site	N. Andover	N. Andover	N. Andover	N. Andover
\$/ton	\$ 150.00	\$ 150.00	\$ 150.00	\$ 150.00
SW disposal agreemt end date	Sep-05	Sep-05	Sep-05	Sep-05
tons recycled/yr	3614	1329	4833	2617
pounds per capita recycled	231.3	130.7	228.0	216.3
curbside, drop-off, both?	curbside	drop-off	curbside	curbside
recycling destination	WMI-Lawrence		KTI	KTI
weekly or bi-weekly?	bi-weekly	Not Applicable	bi-weekly	bi-weekly
trash collection cost	\$ 785,000	Not Applicable	\$ 1,185,939	\$ 889,040
yard waste collection cost	w/ SW	Not Applicable	\$ 180,000	\$ 274,920
recycling collection cost	\$ 354,000	Not Applicable	\$ 317,000	\$ 322,920
resident cost for CRTs	\$ -	\$ 15	\$ 15	\$ -
resident cost for Bulky Items	\$ -	\$ 15	\$ -	\$ -
resident cost for White Goods	\$ -	\$ 25	\$ 15	\$ -
resident cost for other items	\$ -	50/yr sticker	\$ -	\$ -
Recent overrides				FY91, 01, 02

Note: "Considering" = Applied for DEP technical assistance grant to evaluate PAYT.

Municipality	Billerica	Braintree	Brookline	Burlington
Contact	2, Peter Kennedy	0, John McMahon	088, Briony Angus	Syamal Chaudhuri
2000 Census	38981	33828	57000	22876
Road miles	221	145	111	114
PAYT?	no	considering	considering	no
SW hauler	BFI	WMI	municipal, Whitney	BFI
SW collection contract end date	6/30/2005	6/30/2005	7/30/2007	6/30/2003
Recycling hauler	BFI	re Recycled Fiber	Schofield	BFI
R collection contract end date	6/30/2005	6/30/2005	Jul-07	6/30/2003
# hhs served	12005	11896	13256	8382
Units served	all	?	all	1-4 family
Condos included?	yes	?	yes	yes
# schools	9		9	6
businesses	no		55	no
# tons SW/yr (res + Muni)	19653	15469	13026	8915
lbs/hh	3274.1	2600.7	1965.3	2127.2
disposal site	N. Andover	SEMASS	SEMASS	N. Andover
\$/ton	\$ 150.00	\$ 48.00	\$ 68.77	\$ 150.00
SW disposal agreemt end date	Jun-05		06-2007?	Sep-05
tons recycled/yr	2264	2030	4724	1698
pounds per capita recycled	116.2	120.0	165.8	148.4
drop-off site available	motive drop-ff only	both	both	curbside
recycling destination	Hooksett NH		KTI	NH?
weekly or bi-weekly?	weekly	weekly	weekly	bi-weekly
trash collection cost	\$ 978,000		\$ 1,129,625	\$ 610,375
yard waste collection cost	\$ 88,500		\$ 220,634	included +\$30000
recycling collection cost	\$ 404,000		\$ 471,615	\$ 225,000
resident cost for CRTs	\$ -	\$ -	\$ -	\$ -
resident cost for Bulky Items	\$ -	\$ -	\$ -	\$ -
resident cost for White Goods	\$ 5	\$ -	\$ -	\$ -
resident cost for other items	5 for recycling bin	\$ 162	\$ 165	\$ -
Recent overrides				

Municipality	Chelmsford	Lexington	Natick	Needham
Contact	Kathy Bell, 978-25	781-274-7298, R	George Russell	Chip Laffey, 781-4
2000 Census	33858	30355	32170	28911
Road miles	220	153	153	139
PAYT?	FY91-92	FY02-02	FY03 - date	FY98 - date
SW hauler	FWRussell	WMI	municipal	E.L. Harvey
SW collection contract end date	Jun-05	6/30/2007	NA	6/30/2003
Recycling hauler	FWRussell	WMI	BFI	recycling/North Shore
R collection contract end date	Jun-05	6/30/2007	Jun-04	6/30/2008
# hhs served	13010	11313	10380	7125
Units served	all	1-4	1-4	all
Condos included?	yes	no	no	yes
# schools	9		6	7
businesses	no	no	no	?
# tons SW/yr (res + Muni)	15687	9325	8000	8200
lbs/hh	2411.5	1648.5	1541.4	2301.8
disposal site	Covanta	N. Andover	Millbury	Millbury
\$/ton	\$ 60.28	\$ 150.00	\$ 103.00	\$ 83.07
SW disposal agreemt end date	Jun-05	Sep-05	1/1/2008	?
tons recycled/yr	3493	5560	3361	4219
pounds per capita recycled	206.3	366.3	209.0	291.9
drop-off site available	curbside	post drop-off only	both	drop-off
recycling destination	KTI	KTI	BFI - Auburn	N. Shore
weekly or bi-weekly?	bi-weekly	weekly	bi-weekly	Not applicable
trash collection cost	\$ 960,720	\$ 633,300		NA
yard waste collection cost	\$ 54,000	\$ -		NA
recycling collection cost	in SW \$	\$ 595,200	\$ 489,000	NA
resident cost for CRTs	\$ 5	\$ -		\$ 10
resident cost for Bulky Items	\$ -	\$ -		\$ 5
resident cost for White Goods	\$ 7	\$ -		\$ 15
resident cost for other items	\$ -	\$ -	\$ -	\$30 /yr sticker
Recent overrides				



Municipality	Newton	North Andover	Norwood	Wellesley	Winchester
Contact	Elaine Gentile	Bill Hmurciak, 97	Doris Burtma	Gordon Martin-78	Norm Doucette,
2000 Census	83829	27202	28587	26613	20810
Road miles	308	139	109	110	92
PAYT?	no	no	no	no	considering
SW hauler	WMI	WMI		NA	Not applicable
SW collection contract end d	Jun-08	Jun-04		NA	Not applicable
Recycling hauler	WMI	Municipal		NA	Not applicable
R collection contract end dat	Jun-08	Not applicable		NA	Not applicable
# hhs served	30500	7100		8900	4873
Units served		1-8		all	all
Condos included?		complexes not		yes	yes
# schools		8		8	6
businesses		~50 small bus.		yes	es but separate
# tons SW/yr (res + Muni)	30315	11285		8373	9302.4
lbs/hh	1987.9	3178.9	#DIV/0!	1881.6	3817.9
disposal site	Millbury	N. Andover		upstate NY	N. Andover
\$/ton	\$ 120.00	\$ 150.00		\$ 67.00	\$ 150.00
SW disposal agreemt end da	Jun-03	Sep-05		Jul-08	Sep-05
tons recycled/yr	11770	1798		4018	1457
pounds per capita recycled	280.8	132.2	0.0	302.0	140.0
drop-off site available	both	both		drop-off	drop-off
recycling destination	KTI	eRosa, N. Shore		international	ntegrated Paper
weekly or bi-weekly?	weekly	bi-weekly		Not applicable	Not applicable
trash collection cost		\$ 511,000		NA	Not applicable
yard waste collection cost		municipal		NA	Not applicable
recycling collection cost	\$ 1,650,000	\$ 211,000		NA	Not applicable
resident cost for CRTs	\$ -	\$5-15	\$ 25	\$ -	\$ 10
resident cost for Bulky Items	\$ -	\$ -		\$ -	\$ -
resident cost for White Good	\$ -	\$25-30	\$ 25	\$ 20	\$10-15
resident cost for other items	\$ -	5-30 for yard was	\$ -	\$ -	\$125/yr sticker
Recent overrides					

## Appendix F Summary of survey results received from residents

The survey questions below were presented to attendees at the Study Group public hearings, and on the Town web site. A total of 68 surveys were collected, and the total of the responses for each question are as follows:

<b>The Andover PAYT Study Group has researched various options for PAYT programs. After the presentation of information from our research, we would like to get input from the public on several issues. We would appreciate your feedback. You may enter a check mark on each line.</b>			
<b>1. If Andover implemented PAYT, which approach would work best for you? (Note: with all options, you will still be allowed to use a barrel.)</b>	<b>Yes</b>	<b>Maybe</b>	<b>No</b>
Bags	21	8	11
Tags	12	6	17
Bags and tags	7	7	22
Comments			
<b>2. If bags were to be used, how many different size(s) of bags should be offered?</b>	<b>Yes</b>	<b>Maybe</b>	<b>No</b>
One size (about 30-gallon)	26	3	10
Two sizes at two different prices (about 15- and 30-gallons)	17	4	18
<b>3. Assuming that anything that mostly fits into a bag or barrel, will be collected even if it sticks out partially (rug remnants cut into 4' lengths, small chairs, vacuums, etc.), please rank which of the following ADDITIONAL options you would be most li</b>	<b>1</b>	<b>2</b>	<b>3</b>
An fee-based curbside collection program (\$10-20/large item)	12	13	23
A "drop & swap" event 2x/year that is free or charges nominal amounts only for certain types of items (tires, appliances, etc.)	19	10	13
"Free" curbside collection of Christmas trees 1-2 weeks/year	32	4	9
Special, tax-funded curbside collections 2-3 times/year for bulky items	28	9	10
<b>4. Please rank how important it is to you for the Town come up with new options for handling (1= most important, 2= somewhat important, 3= least important)</b>	<b>1</b>	<b>2</b>	<b>3</b>
Tires?	4	15	31
Appliances?	21	18	11
Propane tanks?	17	8	24
Brush?	21	13	17
Other?	9	10	11
<b>5. What outreach methods would be most likely reach you if the Town were to publicize a new program or provide information to help ease the transition to PAYT? (please rank them 1 =most likely, 2 = somewhat likely, 3=least likely)</b>	<b>1</b>	<b>2</b>	<b>3</b>
a. Flyers and mailings	32	5	9
b. Signs - such as electric signs near downtown	4	15	22
c. Public education and hearings	5	9	27
d. Meeting presentations	3	8	28
e. Introductory "freebies" (1 or more free bags or tags) at start	18	10	12
f. Hotline for questions	14	13	16
g. Cable TV	14	10	18
h. Newspaper articles - Townsman	37	4	7
i. Newspaper articles - Tribune	32	6	5

The following comments were transcribed verbatim from the survey forms. The number on each comment indicates the serial number of the survey form on which the comment appeared. Some forms had no comments, and other had multiple comments.

*1. Good Idea, Go for it!, Sell at Market Basket. Would like to use barrel stickers.*

*2. Sell bags at Market Basket*

*3. Opposed to PAYT, prefer better education of recycling program*

*4. Would love to see PAYT for waste reduction, primarily. CVS best place to buy stickers*

*6. PAYT is not acceptable; as taxpayers, we already pay!*

*8. I'm very pleased that the town is addressing this issue. There is far too much waste in this town! Consider a central drop-off for large items.*

*9. Most publicity costs money. Only use free options. Save money!*

*12. I am opposed to PAYT. It hurts families in town. Most families will generate more trash. Families are already bearing a great burden due to school budget cuts. We pay bussing fees, athletic fees, buy books for school libraries, fund trips, & more.. This is a tax, clean and simple, primarily on families.*

*14. No PAYT at curb. You tried 20 yrs ago and it did not work!*

*16. This is a tax on a tax. We are already paying for services with real estate taxes.*

*17. Start using zero base budgeting to run all enterprises within our town's gov't domain. If you don't, you will not be able to pay for items in the future such as listed below. Andover students must meet the State's mandatory hours spent on accredited subjects. The over crowded high school, real good planning as it was expanded not to many years ago. Had that happened in the private sector heads would have rolled. Why do our department head need to run around in new SUV's? Why don't we keep some equipment longer before replacing? Our senior citizens are being taxed out of their homes.*

*18. We are opposed to this potential program. There has been very little publicity concerning it and it has not been successful elsewhere.*

*19. We are against this proposal. It will be a disguised tax increase!*

*21. I believe this study is the biggest waste of money. Instead of wasting time on this idea and this study (which so far has given you next to NO feedback, not to mention how much is it costing??) put the money towards some school programs that have been taken away. If the program was ever implemented, you are going to find more illegal dumping problems with people dumping at others homes. N. Reading tried and failed. I would be more inclined to pay increase taxes than have to deal with PAYT. I would likely hire an outside contractor.*

*24. Have better recycling bins - if recycling remains every other week then it's a waste. Have big recycling bins with lids/color coded available even for purchase in order to keep the recyclables. Be more creative with recycling - every week, better bins, this will remove the recycling headache.*

27. *This is no survey. Many of us don't want to pay for trash pickup when already we're paying \$5000+ in taxes. Instead lay off those DPW guys who lean on their shovels all day or walk their dogs @ the golf course on town time!*

28. *Very important to index # of bags with census #s for each household, ie., larger households get more bags at same cost as households with only 1 or 2 members. It should not be biased against families with kids!*

29. *NO!*

30. *You didn't ask but I am against anything that costs my family more money. Thank you.*

31. *RE taxes have been paying for trash pickup for many years. If this PAYT system goes into effect, it appears to me [as] double taxation. Please maintain trash pick as a "status quo".*

32. *Purchase at Market Basket, Banks, Town Hall, Fire Stations. Need hours outside M-F, 8-5.*

33. *You should have asked if we support PAYT at all - the answer is NO!*

34. *This is an improperly designed survey. It only asks for responses to support PAYT. I do not! Would vote out candidates in favor of programs that sound like survey. Strongly oppose pay plans. Our taxes already deal with removal of trash and recycling.*

35. *Our overwhelming concern is ...cleanup of illegal dumping near Spring Grove Rd and AVIS land. If PAYT proceeds, town must make provision for cleanup of those sites beset by inevitable dumping.*

36. *I am opposed to any fee for trash pickup. It is double taxation. It is very difficult to keep up with all the expenses I have and the real estate tax in going up again. I do not have a computer to submit the survey but I think all the taxpayers should be consulted.*

36. *I have watched the town mismanage its affairs for years, building fiascos, etc. I think its time to take a hard look at the management and replace it with folks who can live within a budget and get things done on time and in budget and who has the backbone to face down unions when times are tight. Someone who understands that getting rid of one administrator often allows retention of two workers.*

37. *My input is DO NOT IMPOSE A PAYT FEE on resident. That service should be paid out of property tax revenue.*

38. *Bottom line is I do not support any type of trash payment plan at all. What are we paying taxes for if not to have trash pick up in its present form.*

39. *I am completely against the PAYT program as it simply points to another form of taxation to skirt Prop 2 1/2. Garbage collection has historically been a part of our property tax basis. This will only lead to illegal dumping including dropping off at condos, rental units and other people's residences.*

40. *I am not in favor of PAYT program.*

42. *Against the whole thing - very bad. Our taxes pay for pick - This is a double tax.*

43. *We are paying almost \$5000 per year in taxes - that should include trash collection ! Cut the budget elsewhere!!!*

44. *I don't like this questionnaire. It sounds like PAYT is a foregone conclusion. Taxes were implemented to pay for this. This is "double trash" payment. Cut spending. Increase class sizes.*

*Students will learn if motivated. I don't want any trash program different from what is now in place.*

*45. I am adamantly against the PAYT program. Our taxes have gone up in the past years and are going up again next year too. All town fees have been raised as well. This program is not necessary at all. You are driving senior citizens, middle class, and fixed income families out of this town. This is just another way for the town to take more of our money.*

*47. I am returning the form with mostly blanks since the form is specifically designed to garner a positive response to PAYT and I am firmly opposed to the entire program. There is no provision on the form to indicate that one does not want PAYT. Therefore, the survey is not an attempt to get citizen input but is clearly designed to support someone's agenda.*

*48. I am not in favor of the PAYT program. I think that this will encourage people to litter and not act responsibly with their garbage. I also think a town the size of Andover should accept brush and other natural debris for composting at the High Plain Road site. Andover should be doing more than just recycling leaves. I often see my neighbors putting out sticks and twigs for trash pick-up. I realize the town is in a tight budget but we should look at other ways to cut money. The last thing we need is people leaving trash in dumpsters, fields, or woods - Joy Kessler.*

*49. I oppose fee for service trash pickup. This should be funded entirely through local taxes. Put an override article before the voters!*

*50. Are current and anticipated property taxes not sufficient to include trash pickup?*

*51. We don't need to pay taxes on top of taxes like the [amb]. It still is a tax. Need to cost by not give away to TM & other. I am on a fix income. I don't get any raise for COL.*

*52. The new trash contract prices are going down - why are thinking of paying? Again the town doesn't know how to live within there budget - like the rest of us have too. I recycle more and more and now you want more money! Forget it! - Donna Rudolph.*

*53. Our daughter in college in Ithaca NY learned how everyone cheats with tags. Use 3 sizes of bags: 33-g with built-in ties to fit 30-g barrels, 39-g and 45-g. We need drop off site - many people are away on the 2 per year collections. Home storage space is a problems for large items. This survey was not adequately publicized - only by fine print in the Tribune article. Were forms available other than the town web-site? Alternative - do we raise taxes only to cover trash? simpler?*

*54. Use bags with distinctive color. Tags can be ripped off. 30-g barrel too small for families; need at least 33-g. 15-gallon bags for single people. Not everyone can store large items for 2x/yr pickup. Tanks should be turned in at a propane site.*

*55. No to everything. This is ridiculous. Our taxes are high enough now. When towns get too greedy, they eventually end up with nothing.*

*56. I am concerned about having to pay as we throw when we no longer can afford health insurance and other important items for our family @ 100% of cost for insurance. If implemented, would suggest 3 mo. Moratorium so we can throw out items from last 18 years that we didn't throw out over the years. Other towns are obtaining needed funds by dreaseing percentage of responsibility of town for employees health benefits; would suggest this be explored. Strongly suggest town vote rather than PAYT decision by selectmen only.*

*57. Totally opposed to PAYT.*

*58. I am against paying for trash pickup. Our current taxes should cover it!! People won't want to pay so trash will remain inside and outside their houses.*

*61. The whole thing is a bad idea!*

*64. I saw the notice in the Eagle Tribune. I work at the library. Asked and one said she would look into it. Found it only went out to E-bay. Many of us don't have computers. So many knew nothing of this. I think there should had a mailing. Thank you - Lillian Hansen.*

*65. We don't need this.*

*66. Leave the current system alone. What about a real estate tax credit for rubbish removal. Isn't this double taxation. Stop town spending. Do you planning in the other town expenses? - like schools.*

*68. This is another tax levied on the citizens of Andover most important task is to cut operating cost. Am totally against PAYT.*

## Appendix G      Minutes from Public Hearing #1 – 20 November 2003

### Meeting Minutes

#### Pay-As-You-Throw Study Group November 20, 2003 Public Hearing

#### Call to Order

7:00 PM

Members in attendance:      Mark Merritt, Cynthia Egan, John Flynn, Kathryn Licata, Alexander Vispoli, Norman Rice, Alexandra Driscoll (Alternate)

Absent members:              Thomas Adams

Liaisons in attendance:      Raymond Hender, Carolyn Dann, Anthony James, Carl Beyers

#### Introduction and presentation

Mark Merritt called the meeting to order, and stated that the public hearing would begin with a brief presentation of the study group mission, and a summary of the pay-as-you-throw information collected by the group to date. Mr. Merritt introduced Selectmen Ray Hender.

Mr. Hender described the origins of the study group, and stated that the group was charged to evaluate the PAYT system for Andover, using information from other towns and by gathering public input at these public hearings. The group is to determine whether a PAYT system is feasible, and can generate net revenue for the town, decrease the amount of solid waste produced, and increase recycling.

Mr. Merritt then introduced the members of the study group, and asked Alexander Vispoli to present the summary of the group research on PAYT approaches.

Mr. Vispoli discussed a series of PowerPoint slides, describing the activities of the study group to date, and providing an example of what a PAYT system might be like in Andover. Mr. Vispoli indicated that the total amount of trash has been increasing over the last several years, despite a fairly constant town population. The cost of trash disposal has likewise been increasing, and in FY04 the municipal solid waste disposal budget is equivalent to 2.3% of the property tax levy. For the average-valued home in Andover, this portion of the annual taxes is roughly \$120 per year. The study group has interviewed representatives from 6 other municipalities in Massachusetts who have experience with PAYT. The group has asked questions of these towns, to learn about best practices, and lessons learned, to determine what difficulties Andover might experience, and how best to avoid or mitigate them. An example PAYT system was described, where residents may purchase special 30-gallon trash bags for \$1.50 each or 15-gallon bags for \$1.00 each. Only trash in these special bags would be collected at curbside. The annual cost of these bags for a household would depend on the amount of trash to be disposed of, and could range from \$52 per year (for one 15-gallon bag per week) to \$156 per year (for two 30-gallon bags per week).

When Mr. Vispoli completed the presentation, Mr. Merritt indicated that the remainder of the meeting would be devoted to collecting comments and questions from the audience. Mr. Merritt pointed out the survey forms available at the back and side tables, and asked that attendees fill them out and leave them after the meeting, or return them to the Town Manager office at a later time. Mr. Hender stated that the survey form was available on the Andover web site, and could be filled out by those residents watching on the cable broadcast.

### **Comments and Questions**

**Rebecca Diaz (Henderson Avenue)** indicated that she felt tags would be a better approach than bags. She asked if there was any plan for providing assistance to families with financial hardship. Mr. Merritt indicated that the study group was concerned about this issue, and had asked each town interviewed what approach they took in this area. None of the interviewed towns provided any form of discount for low-income or elderly households.

**Hal Rubin (Spring Grove Road)** asked if any other towns charged a flat annual fee for trash collection. Mr. Vispoli stated that Natick imposed a \$175/year fee for solid waste expenses two years ago, before shifting to a pay-as-you-throw system.

Mr. Rubin asked if the study group had considered using the town census data to implement an annual fee for trash collection, based on the population of each household. Mr. Merritt stated that the committee has not discussed that approach. Carolyn Dann indicated that she was not aware of any such system in other towns. She indicated that this approach doesn't really address the inequity of flat fees, since it isn't based on the amount trash put out.

Mr. Rubin asked whether the town currently makes money, or breaks even, on trash collection. Ms. Dann explained that Andover has a disposal contract with a guaranteed annual tonnage (GAT) level, and brokers with other towns in the same situation to split the costs of excess or unused waste mass. She stated that the town pays the costs of collection and disposal through tax revenues, supplemented with appropriations from the Tip Fee stabilization fund.

Mr. Rubin asked if the cost of waste disposal would drop in two years, as indicated in recent media reports. Ms. Dann explained that the current disposal rate of \$150/ton is offset by appropriations from the stabilization fund, so that the current cost funded through tax levy is approximately \$75/ton. A new disposal contract will take effect in September 2005, reducing the disposal cost to \$64/ton, with annual increases for each of the subsequent 5 years.

Mr. Rubin indicated that he lives on a wooded street, and experiences illegal dumping of trash today. He expressed concern that a PAYT system would increase the amount of dumping, and asked whether the study group has considered this issue, and what the town would do about it. Mr. Hender indicated that the study group is well aware of this concern, and that the town would be prepared to deal with illegal dumping incidents. Cynthia Egan stated that other towns had reported some increase in illegal dumping when PAYT was initially put in place, but that investigation often led to identification of those responsible, and that town response was effective in reducing further incidents.

Mr. Rubin requested that the study group report include a recommendation that the town provide some sort of follow-up and clean-up response to illegal dumping incidents. Mr. Vispoli stated that several other towns had indicated that enforcement was something that had to be provided for in a PAYT system.

Mr. Hender asked for confirmation, that Mr. Rubin wanted the Town to provide for both enforcement, and for some means of cleaning up. Mr. Rubin confirmed that these were his requests



if PAYT were implemented, but stated that what he really wants is the system we have now, with a per-capita annual charge for each household. Mr. Hender indicated that the equity of a fee system is fairer when the fee is based on the number of bags of trash put out by a household, rather than on the population of the household. Households that work harder at reducing trash are rewarded in this manner.

**Donald Johnson (Applecree Road)** stated that he also experienced illegal dumping in his neighborhood, and that reporting the dumping to police has resulted in acts of revenge by the dumpers. He also stated that his daughter lives in upstate New York, and that she noticed lots of illegally-dumped trash when her town implemented a pay-as-you-throw system. He noted that Andover works hard to spruce up the downtown, and expressed concern that a PAYT system might result in more illegal dumping in public trash barrels on town streets, and that businesses might stop putting out trash barrels if they are abused. He feels there is a danger that PAYT might spoil the town's efforts to keep the downtown area looking nice.

(Mr. Byers joined the hearing at this time)

Mr. Johnson indicated that he has lived in Andover for 36 years, and felt that the previous pay-per-bag system was very inconvenient. As a senior citizen on a fixed income, he anticipates having to debate over saving a few dollars by putting more in each bag, versus hurting his back by carrying heavier bags. He thinks that PAYT is inconvenient for certain groups of people, especially those with limited income. His biggest argument against PAYT is that he thinks it would be a financial disaster. He expressed concern that if PAYT were implemented, then voters would feel put-upon with both additional fees and inconvenience, and might take it out on the town the next time that a Proposition 2½ override is presented.

**Paula Ziegenbein (Fulton Road)** asked if the current tax levy fraction for solid waste disposal (2.3%) resulted in a surplus or a shortfall. Mr. Hender stated that there is no shortfall or surplus today, and explained that the solid waste costs are included in the general budget, under the Department of Public Works, and are funded by the stabilization fund and the general tax levy to match the actual costs of solid waste collection and disposal.

Ms. Ziegenbein asked where the 2.3% of tax levy would go when the tipping fee goes down (with the new contract in 2005). Mr. Hender explained that the reduction in tipping fees would result in a reduction in the solid waste portion of the DPW budget. Ms. Ziegenbein asked whether the savings in budget that might occur when the tipping fee is reduced could be used somewhere else in the budget, or if there would be a reduction in taxes. Mr. Hender stated that the reduction in solid waste disposal expense would be absorbed by other portions of the town budget, which are generally increasing each year.

Ms. Ziegenbein asked what percentage of the towns surveyed by the study group had curbside trash collection service in place before implementing PAYT, as opposed to using a dump or landfill. Ms. Dann stated that about a dozen towns the group has looked at in Massachusetts that have curbside collection with PAYT, and seven or eight of those towns had curbside trash collection before implementing PAYT.

Ms. Ziegenbein stated that she was a resident of Merrimack when their landfill was closed, and they implemented a PAYT system. She indicated that the program was inconvenient - having to buy tags, working to stuff bags as full as possible, and not having a convenient way to dispose of larger items. A recycling program was implemented at about the same time as the PAYT system. She indicated that Merrimack did not fund solid waste collection and disposal through taxes prior to the

PAYT system. She shares concern that implementing PAYT in Andover to generate revenues might create resentment, and possibly preventing another (major) type of funding to be approved by the town.

Ms. Ziegenbein asked whether there would be an increased cost associated with the increased recycling that would be expected with a PAYT system. Mr. Vispoli stated that there would likely be an additional cost, and that the DPW had indicated it might be necessary for the contractor to add another truck to the collection route. The contractor requested \$130,000 for adding a truck several years ago, and Mr. Vispoli indicated that the cost may have increased to perhaps \$150,000 today.

**Paul Rollins (Strawberry Hill Road)** indicated that his neighbor uses trash barrels to keep crows and animals from tearing open the trash bags. He asked how this would work with a PAYT system, and how would residents dispose of larger items that would not fit in bags. Mr. Merritt indicated that trash barrels could still be used under PAYT. Residents can put the special town bags into barrels, or put 'tagged' bags into the barrels. Mr. Merritt also mentioned that some towns offer a subscription sticker that would allow a barrel to be used without any bags. Mr. Merritt indicated that bulkier items that do not exceed the weight or volume limits of a bag could be disposed of by putting the item partially in a bag, or wrapping a bag around the item. Larger items would be a bigger issue, and the study group is looking at find which methods would be most convenient for dealing with mattresses, furniture, and similar items, such as swap events, special collections by appointment, for example.

**Paul Reynolds** asked what Andover would do about residents dumping trash in other bordering towns. Mr. Merritt indicated that this is another form of illegal dumping, and the Town would need to consider how to address this issue.

**Donald Johnson** stated that the town would need to address the problem that stickers (tags) might be stolen off bags. He observed that this would probably not be a problem if bags are used (instead of tags). Mr. Hender indicated that some towns had developed stickers which would be destroyed by being removed from a bag or barrel, to avoid this problem.

**Hal Rubin** asked how residents would be able to obtain either bags or tags. Mr. Vispoli stated that they would be available at local retailers and/or at town offices. Mr. Rubin expressed concern that it may inconvenient to find these items and purchase them.

Mr. Rubin asked if the town was unhappy with the current trash collection system, other than the financial aspects. Mr. Merritt observed that Andover currently disposes of approximately twice the total waste mass per capita of other Massachusetts towns that employ PAYT. Mr. Rubin asked if Andover was recycling less than other towns. Ms. Dann indicated that Andover was recycling reasonably well, but just disposing a lot. Mr. Vispoli asked for clarification of the disposal statistic, and Ms. Dann explained that Andover throws out about 3000 pounds of trash per household per year, and that Concord throws away about 1200 pounds per household per year and there are several other towns in the 1500 pounds per year range, about half of what Andover throws away.

Mr. Rubin asked what would happen if large numbers of residents switched to private haulers for trash disposal, and would this create a financial difficulty for the town. Ms. Dann pointed out that the reduced fees from bags would be matched by a reduction in trash disposal costs. In effect, any reduction in trash collected by the town is financially beneficial to the town, whether it's because of increased recycling, decreased trash production, or by alternate disposal means.

**Paul Rollins** asked how much reduction in trash could be expected with PAYT, since Andover already recycles at a reasonable level. Ms. Dann explained that research from across the country

shows that PAYT causes three forms of trash reduction: (1) increased recycling (2) increased composting, and (3) waste source reduction. She recounted the story of acquaintances who asks shoe retailers to keep the shoe boxes, so the family doesn't have to be disposed of them. These three mechanisms appear to have roughly equal effects on the amount of trash reduced, so about one third of the reduction in trash tonnage from PAYT usually shows up as increased recycling tonnage. Ms. Dann stated that while Andover does a pretty good job recycling today, there is room for improvement. A PAYT system would provide an incentive for residents to recycling items they currently don't bother to recycle.

**Paula Ziegenbein** stated that when recycling was implemented in Merrimack, there was heavy promotion in the town. Recycling became ingrained in their household. The town recycling program had good initiation and follow-up, with flyers and mailings.

**Paul Reynolds** asked why increased costs couldn't be absorbed within the town tax payments, which are also increasing each year, instead of shifting to a PAYT system. He stated that he doesn't think anyone in the town is going to want to adopt a system like this as opposed to just a slight increase in taxes. Mr. Merritt stated that the Study Group was chartered to evaluate whether the PAYT approach would be feasible, and that the decision whether employ it or not was a separate issue for the Selectmen to determine. Mr. Hender explained that the tax revenues the town can collect are limited by Proposition 2½. If the budget of one department in town needs to make an increase, then this increase needs to be absorbed by all other departments. A recent example of this type of increase is the cost of health insurance for town employees. There has been a 20% increase in health insurance costs over the past couple years, and this increase in cost is immediately taken off of the revenues the town can raise by taxation. All such fixed cost obligations are subtracted from the available tax levy limit amount, to determine the amount available for the remaining town operating budget. Mr. Hender indicated that in most states in the country, the towns are allowed to increase tax revenues as needed, to pay for the services the town chooses to provide. Andover cannot do this, because of Proposition 2½. Mr. Byers added that there are many costs which the town cannot, by law, avoid paying; for example, the cost of running the schools is more than half the annual budget.

**Hal Rubin** asked whether such fees were limited under Proposition 2½. Mr. Hender stated they were not. There are three funding sources for the town: (1) state aid, (2) property taxes, and (3) local revenues, such as those for building permits, parking meters and violations, and dog licenses for example. The local revenues are not constrained by Proposition 2½.

Mr. Rubin asked whether trash collection could be handled by an enterprise fund. Mr. Hender indicated that solid waste costs could, legally, be funded through an enterprise fund, but that this approach was not recommended by the Town and independent accountants. The revenues and expenses related to solid waste are not enough to warrant creation of an enterprise fund, which can only be created through Town Meeting. Other mechanisms are available and may be more appropriate, such as a revolving fund. A revolving fund is used, for example, by DCS, to allow the fees collected for courses to be used to offset the costs of providing those courses. Mr. Hender stated that the trash fees from bag sales would likewise be used to offset the costs of trash disposal.

**Donald Johnson** asked if the charges for trash bags would be set to match the actual cost of disposal. Mr. Hender indicated that that this was part of the PAYT model.

Mr. Johnson then observed that if trash disposal is paid by fees, rather than taxes, then residents will be unable to deduct this payment from their incomes taxes, and the financial impact could be significant. Mr. Hender agreed that the trash fees would not be tax deductible, and so if the trash

fees paid by a household were roughly \$100 per year, and the household was paying (for example) 40% income tax rate, then they would be losing about \$40 worth of deductions.

Mr. Johnson asked how much trash the average household put out each week. Mr. Merritt stated that on average, Andover disposes of approximately two 30-gallon trash bags each week, though some households dispose of much less and some dispose of much more. Mr. Johnson observed that the cost of private collection, at \$30 per month or \$360 per year, would be substantially larger than the bag fees, as so there probably wouldn't be many people inclined to switch to private collection.

**Rich Bizzozero (River Road)** asked if there was a minimum commitment to trash tonnage now, and if there was any chance that recycling could go up so much that we wouldn't be able to meet our minimum commitment to NESWC. Mr. Hender stated that there was a Guaranteed Annual Tonnage (GAT) clause as part of our contract with NESWC, of 12,304 tons. When the contract expires at the end of 2005, the GAT limit goes away. Ms. Dann explained that the towns using the NESWC incinerator are all subject to the GAT limits that were set back in 1985. Some of these towns have GAT limits that were set too high, and some have limits set too low. Many of these towns have banded together to broker their trash disposal allocations, so that towns that are over their limit can match up with towns that are under their limits, and wind up splitting the costs of the disposal. More towns are over their GAT than under their GAT, so if Andover were to implement PAYT and reduce trash below our GAT (which is fairly likely), the impact would be that instead of paying the \$150 per ton for being under, we would broker such that we would split the cost with another town over their GAT, and hence pay only \$75 per ton. When the new contract takes effect in FY06, the whole GAT require disappears.

**Paul Rollins** stated he was not in favor of PAYT, but that if it were implemented he felt that the stickers would be the best option. He suggested that it would be convenient if the stickers could be available through the Town's web site, or if there was a box to check on the quarterly tax statement to order them through the mail. He recalls with the previous Andover bag system the bags were low quality and would often break, so the stickers would avoid this problem. Mr. Rollins asked if there was a difference in the cost to the Town to use stickers versus bags. Mr. Merritt indicated that bags cost more than stickers. Ms. Dann stated that basic bags cost 14 – 16 cents per bag, and that the financial models factored this cost in. For small stickers that would go on a bag, the cost is about 1.5 cents, where larger barrel stickers are back up to about 15 cents. The cost difference seems fairly large, but compared against the per-bag fee of \$1.50, the costs are fairly small.

Ms. Dann explained some of the pros and cons of bags versus tags, based on the input from other towns. One advantage of tags is that they are good for putting on odd-sized items, but that some towns have experienced tags falling off in poor weather and resulting in bags not being collected. This experience can cause tension between the resident, the town, and the trash hauler. There have also been silly stories about trash haulers taking off tags and reselling them, and of some people trying to duplicate them at home on their color printers, or people trying to use half a tag on a bag instead of a full one, or leaving cash out with the bags (so the driver gets the revenue instead of the town). Of the 12-15 towns that she has talked to, about half use tags and half use bags. Those using bags seem to be happy with that approach; about half of the towns using tags are happy with them, but the other half seems to be trying to switch over to bags instead. With bags, it seems easier to communicate to residents what the per-unit amount of trash is; with stickers some residents may try to get larger barrels. There seem to be good reasons to use both bags and barrels, and she has at different times been in favor of each.

(At this point, Mr. Anthony James joins the meeting)

Mr. Rollins asked if the town would need to hire more help to administer the PAYT system and handle phone calls. Kathryn Licata indicated that most towns the group talked to indicated that they initially had to hire part-time help for answering calls and answer questions, but that after the program matured the level of assistance dropped off, and that none had a full-time PAYT person on staff. Ms. Dann added that Concord has a dedicated full-time person responsible for the entire trash and recycling service, including tasks now handled in the DPW department in Andover. Other towns have absorbed the added PAYT administration effort by adding to the duties of exist staff who were not fully busy, and perhaps on the verge of being laid off. Mr. Rollins observed that after last year, Andover has already laid off or relocated all the staff who were not fully busy, and so the additional administration of PAYT would probably require us to hire another person, and the revenues would then need to pay for their salary. Ms. Dann stated that the Study Group financial projections included a budget allocation for a full-time additional staff person, and that there was still a net benefit from the revenues.

**Mr. Bizzozero** stated that he preferred not to use plastic bags at all, and that he would prefer to just buy a sticker for his barrel. He suggested that barrel stickers might be offered for different barrel sizes, and wondered if this option had been considered. Mr. Vispoli indicated that Concord offers the option of buying a 6-month barrel sticker, and that this is very much of an option for Andover. Mr. Bizzozero observed that many people are already used to using a barrel, and this type of an approach would allow them to continue using the same approach, and be most convenient. Mr. Vispoli stated that the idea of offering stickers for multiple sizes of barrels was a new idea that hadn't come up in discussion with other towns. Mr. James observed that in Concord, they chose to standardize on a single size barrel.

**Paula Ziegenbein** asked what the sequence of events would be if the committee recommends PAYT to the Selectmen on December 1. Mr. Hender stated that if the Study Group finds that PAYT is not feasible, then the Selectmen will drop the issue. If the group recommends moving forward with PAYT then the Selectmen would most likely enter into additional research in terms of public input, more questions from the PAYT committee, outside resources, and at least one more public hearing. The Selectmen would then decide whether to move forward with the committee's recommendation. All of this needs to be accomplished within a short timeframe, because there is obviously a budget impact and so it needs to be worked out before the Town Manager completes his budget near the end of January. The Selectmen also would need to decide whether to bring the PAYT decision before Town Meeting, and Mr. Hender stated that he could not predict how the board of Selectmen as a whole would rule on that question. Mr. Hender indicated that if the PAYT choice were presented to Town Meeting, then the town may need to have two alternative budgets prepared: one if PAYT is accepted, and one in case it is not.

Ms. Ziegenbein suggested that the PAYT survey form should have a place to check off whether or not you prefer to have a PAYT program implemented. Mr. Merritt indicated that anyone filling out the survey form should feel free to write additional comments on the back of the form. Mr. Vispoli asked whether it would be possible for residents to communicate additional comments to the Study Group by submitting them through the Town Manager's office. Mr. Hender said yes, that emailing comments to the Town Manager's office would be appropriate, indicating "pay as you throw" in the subject line, and the Town Manager's secretary would pass these on to the group. Mr. Vispoli pointed out that the Study Group needs to report to the Selectmen by December 1<sup>st</sup>, and urged anyone with additional comments to get them in quickly. Mr. Merritt stated that the Study Group was conducting another public hearing the next day, at 10:00am in the same room, and holding

another public meeting the following Tuesday in Memorial Hall. These are both opportunities for the public to express their opinions directly to the group.

**Donald Johnson** suggested that the pricing of bags should be proportional to their weight or volume, and that there might be problems if there are two sizes of bags and the prices are not proportional. He also felt that there would be less backlash and negative feelings if the PAYT decision is presented to Town Meeting, rather than just being decided by the Selectmen.

Mr. Hender wanted to revisit the issue of convenience for purchasing bags, and the comment that “it’s one more thing to do, to go out and buy a bag.” He suggested that most people already are going out to buy bags anyway, and that these bags would be on the retailer’s shelves. The town bags would be displacing the current bags retailers sell now, and so people could be just buying a different sort of bag.

Ms. Dann encouraged the audience to add comments on the back of the survey form to indicate the locations where they would prefer to have bags available.

**Paula Ziegenbein** asked if the group had spoken to any retailers about putting bags on their shelves yet, such as CVS or Market Basket. She stated that in her experience, these retailers are not willing to give up shelf space for products that will not be profitable for them. She sells light bulbs to retailers, and finds that retailers are very willing to put 60 Watt bulbs on their shelves, because they sell well, but they are very reluctant to put \$7 halogen light bulbs on the shelf because they don’t sell as well. **Hal Rubin** indicated that the Town would have to allow retailers the same margin on our bags as they receive on standard commercial bags. Mr. Merritt indicated that the Study Group had discussed this issue in detail with each of the towns they interviewed. The general experience seems to be that towns have not had a great deal of difficulty convincing local retailers to carry these bags. All of these concerns are very significant ones, and the group has not done any organized canvassing of retailers at this point, and considers it premature until a recommendation has been made. One of the observations other towns have made is that once a town adopts the use bags or tags for PAYT, then they become something residents need and have to buy, so retailers enjoy the traffic they have from carrying these bags, even if they are sold for cost. Some towns have chosen to offer retailers a small margin, others do not, but no town has identified this as a significant problem area. This is a worthy issue to be concerned about, put the group’s input from other towns is that it hasn’t been a problem.

Mr. Merritt asked if there were any other questions or comments.

Mr. Hender introduced Anthony James, who was sitting in the audience, as a member of the School Committee, and liaison to the Study Group.

**Donald Johnson** observed that many retailers currently sell stamps at cost, since it brings in additional traffic, and that bags or tags might be handled in an analogous manner.

**Rich Bizzozero** asked if survey forms were being collected tonight, or had to be dropped off later. Mr. Merritt responded that forms could be dropped off as the audience left the meeting, or could be completed and returned later. Mr. Vispoli added that if anyone had additional comments they thought of after completing the form, they could be submitted separately.

### **Conclusion**

Mr. Merritt thanked the audience for taking the time to come to the hearing, and for providing their input to the study group.

Mr. Merritt closed the meeting at 8:20 pm.

## **Appendix H      Minutes from Public Hearing #2 – 21 November 2003**

*[Note: this appendix contains a draft version of the minutes from the 21 November public hearing, which had not been formally approved by the Study Group prior to publication of this report.]*

### **Meeting Minutes Pay-As-Throw Study Group November 21, 2003 Public Meeting**

#### **Call to Order**

10:20 AM

Members in Attendance:      Mark Merritt, Kathryn Licata, Tom Adams, John Flynn and Alexander Vispoli.

Liaisons in Attendance:      Raymond Hender, Tony James, Carolyn Dann and Carl Byers.

Mark Merritt announced the following points to be covered:

- Mission of the PAYT Group
- PAYT concept
- Activities of the Group to date.

Mr. Merritt advised that a PAYT public feedback survey form was available for members of the public to complete and that the survey is also available on the web page.

Selectmen Ray Hender was introduced. He is serving as a liaison to the Group, which was formed to determine if PAYT was feasible in Andover as a means to raise additional revenues for the Town. In addition, the group has been advised by two other liaisons, Carl Byers, Tony James and by Carolyn Dann from the Town Finance, School and Recycling Committees, respectively.

The PAYT Study Group committee was formed and given a defined mission by the Board of Selectmen. Specifically, the Group was asked to determine the feasibility of a PAYT trash collection system and ensure that PAYT

- generates significant revenues.
- reduces the amount of solid waste disposal
- increases recycling volume

PAYT Group is to present their findings and recommendations to the Selectmen on December 1, 2003. Selectmen will then consider the recommendation and decide whether to move forward with the PAYT system. If the Board of Selectmen feels the town should move forward with this, they will most likely present it at Town Meeting.

Next on the Agenda was a slide presentation by Alex Vispoli detailing where the Town is today and the observations and recommendations of the Group. The following items were highlighted during the presentation:

- Andover's current solid waste status
- Changes to Disposal Costs
- Residents currently pay approximately 2.3% of their annual real estate bill for trash service
- PAYT committee met with 6 communities, which have implemented PAYT system
- Start up issues, lessons learned, materials used etc were discussed with each community.
- Costs of bags
- Descriptions of bags
- Bags vs. tags
- Bulky items
- Drop & Swap

### **Public Questions/Comments**

**Bob Willard, 76 Tewksbury Street:** Is it true that the PAYT system cannot be implemented without a vote from Town Meeting?

**Selectman Ray Hender:** At this time it is not clear whether the Selectmen can decide this matter. The Town bylaws will be reviewed to determine if the selectmen can make this decision. If the bylaws allow for Selectmen to make this decision, that is an option we will consider. If the bylaws preclude the Selectmen making this decision, the matter will be taken to the Town Meeting.

**Bob Willard:** The committee seems to be in favor of the PAYT and has done a good job but my question is whether PAYT is better for the town than the system we have been using in the past. Has the down side been looked at as much as the up side of the PAYT system? The upside consists of reduced trash amount, increased revenue and increases in recycling. On the other hand, this system is going to be more costly to administer, more complicated and it will lead to some degree of problems such as the potential for people to throw where they shouldn't, and for people to recycle things they shouldn't. No mention has been made for potential problems and have you discussed these problems with other towns.

**Mark Merritt:** Commented that the PAYT committee has spoken to other towns regarding illegal dumping and noted what other towns are doing to enforce the PAYT system. While there are certainly instances of illegal dumping, and costs associated with monitoring and enforcement, they were modest in number. Quick and thorough investigation and follow up also seemed to have the effect of helping to limit the incidents of illegal dumping.

**Alex Vispoli:** Noted that many of the towns we spoke with who have implemented a PAYT plan each carefully considered and planned for illegal dumping. Like Andover, enforcement requires an additional resource and reflects additional costs to the town.



**Tom Adams:** Stated that it is critical that the Town does an effective job of communicating the program and its expectations to the residents as part of program implementation.

**Bob Willard:** Stated that he assumes that the Group gathered accurate and verifiable data documenting the amount of actual cost reductions. Why wasn't that included in the presentation?

**Carolyn Dann:** Noted that number data for towns can be old and somewhat inaccurate because some programs were implemented as long as 10 years ago. Accurate before and after data is tough to find. A good example is Natick, which is most comparable to Andover. Natick's goal was to offset 1.2 million of disposal costs and not try to recover their fixed costs such as operating expenses.

**Tony James:** Cited that Gloucester reduced solid waste more 40% in spite of the fact that population has increased during the same period. It demonstrates that solid waste reduction is sustainable over the long term, in Gloucester's case, at very high levels.

**Carl Byers:** Noted that Bob commented that he felt the committee had made up their mind. Carl stated that the committee had not made up their mind and now was the time to add any comments as the committee is looking for input.

**Tina Greenwood (Address Unknown):** Asked the Group to respond to a recent *Sound Off* column in the Lawrence Eagle-Tribune that stated in essence that with the contract change at NESWC due in 9/05 why not just wait and gain the savings then?

**Selectman Hender:** Reviewed the current stabilization fund, which the Town has paid into in past years and is now drawing from as an offset to costs. He further explained that the current contract expires in September 2005. The fee charged per ton will increase slightly each year of the contract. For example, from Sept 05 – June 06 the cost increases \$64.00 per ton in subsequent years the cost will go to \$68.00, \$71.50 and July of 2009 thru June 2010 will rise to \$73.00. While it will reduce our average cost per ton by \$6 from the current level, unless an effort to reduce solid waste disposal is made, our disposal costs will increase.

**Alex Vispoli:** Clarified that the money in the stabilization fund are dollars that the Town has paid into the fund in years past.

**Carolyn Dann:** Noted the net impact to the Town's budget this year has to be considered as the town is still drawing from the stabilization fund.

**Tina Greenwood:** This is an important point that the residents need to understand. Many people think our costs will drop in a year and a half, so why change now? During the next contract, there is no additional payment into the stabilization fund, correct?

**Selectman Hender:** Correct. The stabilization fund will be used up. Costs will be with where they are now. **Carolyn Dann** concurred.

**Tony James:** In round numbers, the new cash outflow for trash costs, now or later, is about \$2 million. Total disposal cost is \$150 per ton but deduct half because of the contribution of the stabilization fund. The net impact on the budget is \$2 million annually through 2010.

**Bob Willard:** Is the price based solely on a flat rate per ton? So, if we start delivering less trash, the price per ton will increase?

**Selectman Hender:** No, because we contractually guarantee tonnage. It is a “put or pay” contract. We pay for the tonnage whether we deliver it or not. There is no guaranteed tonnage in our new contract.

**Jennifer Bouchard, Rock O’Dundee Road:** Stated that she had been in two other communities with PAYT plans. She prefers to pay her fair share for the trash her household disposes and believes PAYT will save the Town money.

**Sally Sarni, Ballardvale Road:** Feels that the current trash system works very well and that PAYT may cause more irritation than it’s worth. Believes a good goal for our trash collection program would be to find a way to route useable discarded items to places that can use them (e.g. Lazarus House).

**Mark Merritt:** Many residents probably share the observation that the present system works very well. It is important to note, however, that Andover has a high amount of disposable solid waste when compared to other communities and that getting rid of that waste is expensive.

**Tina Greenwood:** Stated that while the current system is indeed very user friendly, the budget challenges the Town faces and will face in the future are significant. They will force Town residents to look at their most critical programs, like our schools, and work to find new sources of revenue to support these programs.

**Michael Frishman, 11 Crescent Drive:** Stated a couple of disclosures. First, he lives in a condo where trash collection is by private hauler. Second, he issued a warrant to the Town a couple of years to review the feasibility of PAYT. The Town did not act on that warrant. He asked whether our report will take into consideration all trash disposal related costs, not just the tipping fee. Has this been factored into the PAYT calculations?

**Mark Merritt:** The Group has reviewed a model, which includes all costs in the DPW budget. Costs associated with additional enforcement, support for administration and potential increase in costs associated with recycling increases have been examined. The total costs are in excess of 3 million of which 2 million is associated with tipping.

**Michael Frishman:** What is the tipping fee as a percent of the total costs?

**Mark Merritt:** About one-third.

**Tony James:** If you assume a \$150 per ton cost, the total cost is about 3\$ million of which \$2 million is associated with the tipping fee.

**Michael Frishman:** The contract with the hauler is separate, correct?

**Tony James:** Collection plus other DPW costs equals the other \$1 million. From today’s outflow costs is \$2 million, half of which is collection and general DPW activities and the other half is disposal.

**Michael Frishman:** (PAYT) can impact total cost by 30-40% if system is introduced that encourages less waste disposal. Does that system need to be part of the Town budget? Can’t Board of Selectman act as waste commissioners and, under state law, bill residents for that separately through an Enterprise Fund, like we do for water? The impact on not having trash disposal as a deductible tax expense would be minimal.

**Tony James/Alex Vispoli:** Other towns, like Concord, have a combination of a fixed fee per household plus a cost per barrel (or bag) that are similar to an Enterprise Fund. Most towns structure bag or barrel fees to cover just the disposal costs. The collection fees remain part of the tax levy.

**Selectmen Hender:** In Concord, they have a 2-tier system - \$109 per year per household for collection; \$1.50 per bag for disposal. They also have a barrel sticker.

**Michael Frishman:** Do you foresee problems with residents buying special bags or with local merchants selling them?

**Alex Vispoli:** While this group has not talked to any local merchants, other towns do use this approach and it works quite well.

**Tom Adams:** Other communities have assimilated this approach very well.

**Bob Willard:** I assume that the first level of enforcement will be the collector. For example, if I put out the wrong color bag, who decides not to pick it up, the collector?

**Katherine Licata/Carolyn Dann:** Yes. And while we haven't discussed this directly with our hauler, BFI, we do know that BFI has a lot of experience working with other communities that have PAYT enforcement rules. They are very experienced and will work very well with the Town should we implement PAYT.

**Bob Willard:** Will the leaf collection arrangement change?

**Carolyn Dann:** The intent is not to change our present method of leaf collection.

**Bob Willard:** Stated that there are "rumors" that if someone were to give the trash hauler driver a "tip" (i.e. leave cash for the driver) that items that shouldn't be discarded would "magically" go into the back of the truck. Does the Group see that changing under PAYT?

**Mark Merritt:** This isn't a topic that the Group dedicated much discussion to.

**Tom Adams:** This does happen and there is little that we can do under any program to control it.

**Carolyn Dann:** Suggested utilizing the survey card to cite areas where PAYT, or any trash collection program, could better meet the resident's needs.

**Bob Willard:** Things that won't fit into bags need to be addressed.

**Michael Frishman:** Felt that the behavior of "tipping" the disposal truck driver is minimal and that the hauler faces serious consequences if caught disposing of anything forbidden. The new program, if implemented, would have those same consequences.

**Carolyn Dann:** There are a couple of alternatives suggested on the survey form for items that will not fit in bags.

**Kelly Doherty, Canterbury Street:** Stated that she likes PAYT and reiterated the idea stated earlier about making useable disposed of items available for charities. She believes that PAYT will generate revenue for the Town.

**Mark Merritt:** Stated that the Group is eager to get input from the public of what they feel the most effective method is – bags, tags or barrels.

**Sally Sarni:** Feels strongly that even if bags are chosen, residents must be able to use barrels to keep out birds and wildlife. Also, residents should be able to put their trash out the evening before their scheduled pick up day.

**Michael Frishman:** Suggested that a range of options be available to residents (i.e. bags, stickers, tags)

**Jennifer Bouchard:** Likes the idea of barrel stickers. Expressed concern of how Town will manage changes in price – worried about getting stuck with old bags.

**Kelly Doherty:** Parents live in Concord where private trash collection and hauling is allowed. Is this something contemplated for Andover?

**Mark Merritt:** Andover presently does allow for private collection and hauling by license contractors. We are not planning to change this.

**Carolyn Dann:** FYI, the average cost of private collection is about \$480 per year.

**Kelly Doherty:** How many people attended last night (11/20 Public Hearing)?

**Mark Merritt:** I counted 11 people.

**Bob Willard:** Why do you foresee a solid waste reduction under PAYT?

**Carolyn Dann:** In other towns we've talked to that are similar to Andover, they've experienced a 17-33% reduction. It is dramatic, immediate and sustainable. The reduction comes from a few places. A third goes to recycling; another third goes to composting and the balance is from a higher level of attention to reducing waste and from changed habits. One clear example is what happened in Lexington. When they implemented PAYT, solid waste went down 33%. When they canceled PAYT, it started to climb back up.

**Mark Merritt:** A reminder, please complete the survey. It is here today and also appears on the Town webpage (at this point, **Selectman Hender** gave some specific directions on how to access the survey on the website). You can also email your comments to the Town.

**Carolyn Dann:** While it's not on the survey, please let us know what stores you would like to see carry the stickers. Both here in Andover and in other towns.

**Mark Merritt** thanked the members of the public for attending and officially closed the meeting.