

Proposal to Establish a Maplewood Township-wide Residential Garbage Collection System

Revised in October, 2011 to reflect public comment and additional information. Substantive changes include the removal of the recycling improvement fund and costs for municipal collection from the household cost estimate, adjustments to account for the cost of bags across scenarios and the consideration of stickers as an alternative to marked bags.

Executive Summary

Maplewood's current garbage system does little to encourage residents to reduce the amount of garbage they generate while costing residents substantially more than comparable systems in neighboring towns. The proposal calls for a systematic solution consisting of two key elements: A Pay-As-You-Throw system that will encourage households to recognize the cost of garbage disposal while maintaining the current convenience, and a unified contract that promises to lower costs for almost all residents.

The proposal uses the example of the successful system in Chatham Borough to suggest how the system could work, to estimate individual costs, and to conclude such a system would likely save residents a total of hundreds of thousands of dollars. The example of Glen Ridge is given to show that a town-wide contract for a system identical to our current one produces substantial per-household savings.

Finally the proposal documents the magnitude of the benefits from a successfully implemented system of this kind. National research indicates that a system like the one proposed produces environmental benefits comparable to major reductions in gasoline consumption (a 10% decrease in garbage would equate to 200,000 gallons) or investments in alternative energy, while substantially reducing upstream and downstream pollution.

The Proposal

Goals:

1. Reduce the amount of refuse going from Maplewood households to the Essex County incinerator.
2. Lower the overall cost of garbage collection and disposal.
3. Improve equity by letting households with low disposal rates reduce their costs more than those with high rates.
4. Maintain or improve the convenience of the existing system.

Background:

Maplewood residents currently have their trash collected by one of two private companies (Waste Management and Waste Industries). The transaction is between the company and the household. The township is not contractually involved, although it does set certain parameters, including collection schedules and the rear-yard collection. Both companies offer plans that provide collection of one or two 30-gallon containers, once or twice per week. While this price structure offers customers some opportunity to reap savings by reducing the frequency of pickups or volume picked up, in practice the system provides little incentive to reduce waste and most customers opt for the maximum service.

More than 7,000 U.S. towns and cities (total population 75 million)*; including Chatham, Chester, and Mountain Lakes in New Jersey**; have adopted a "pay-as-you-throw" (PAYT) pricing structure, for their household refuse collection that directly rewards

customers for reducing their garbage. Most PAYT systems require residents to purchase specially marked bags or stickers. All household trash and garbage must be placed in these bags. The price per bag covers the cost for tipping at the landfill or incinerator. Collection costs are fixed and charged separately. PAYT allows customers to pay for additional on-demand capacity only when they need it. This provides a highly convenient system while providing good value. At the same time, because you pay for each bag you throw away, it encourages households to reduce their trash and garbage volumes.

The Proposal

Maplewood proposes to implement a five-year township-wide residential PAYT garbage hauling contract put out to bid by the Township on behalf of all residential households in single family and up to 4-family residences. By bidding out a single contract, evidence from nearby towns indicates that Maplewood can secure a better price for each household and also manage implementation of PAYT. Without a unified contract, PAYT would be difficult or impossible. Each property owner covered by the program would pay a flat fee to the Township to cover cost of collection. They would also pay for disposal based on the number of bags of refuse they actually threw away.

This contract would include the following provisions:

1. Twice per week rear-yard pickup and hauling
2. All garbage will be disposed of in semi-transparent bags that are specifically identified as being for Maplewood garbage or in commercially available bags with a PAYT sticker attached. These bags/stickers would be provided to residents by the contractor at a cost that covers the cost of the bag/sticker and disposal charges typically incurred for a bag of that size at the Essex incinerator
3. The contractor will provide monthly pickup of bulk waste too large to fit in the designated bags
4. The contractor will also collect garbage from municipal buildings and designated public garbage receptacles in the township's business districts, which will be funded by the township operating budget.
5. The contractor will be prohibited from collecting bags containing recyclable materials or yard waste.

Budget

Chatham Borough bid out a garbage collection program that started in March of 2011 and is similar to this proposal. Glen Ridge solicited rear-yard and curbside alternate bids for a town-wide system starting in 2010 and the winning bid for twice a week, rear-yard collection with no incentives to reduce volumes of garbage. The following budget is based on their costs:

1. Garbage collection: \$125 - \$190 per household per year. Chatham's collection cost is \$59 per household per year for curbside pickup. Their contractor bid a rear-yard option for an additional \$67 per household for 180 residences. The winning bid for Glen Ridge's twice-a-week, rear-yard collection starting in January 2010 was about \$190 per household for a notably higher per household volume of garbage. An exact price for Maplewood will only be known through competitive bidding. This proposal calls for rear-yard pickup twice a week, which will maintain the existing level of convenience. Bag costs are expected to be \$1.25 for a 30-gallon bag averaging 25 lbs, \$0.70 for a 13-gallon bag averaging 12.5 lbs, and \$0.50 for a 6-gallon bag averaging 7 lbs. These prices would cover disposal cost and allow \$0.15 – \$0.20 for the cost of each bag. This proposal assumes that the combined cost of

commercially available bags and stickers would be about the same (13-15 cents per bag and 3-5 cents per sticker). Bags or stickers would be distributed by the contractor, including by sale in local stores. In Chatham, two stores sell bags, without markup, to attract customers and the contractor will deliver bags ordered over the phone.

2. Administrative costs: Costs of billing and monitoring the contractor are estimated to be \$20 per household per year. This would be the responsibility of the township, with funding coming from the collection fees that are billed to the households.
3. The total cost per household would vary by the amount of garbage generated. All households would pay \$145 – \$210 per year as a fee similar to the current sewer fee. In addition, a household using one 13-gallon bag per pickup (100 per year) would pay about \$75 in per bag/sticker charges for a total of about \$220 - \$285 per year. A household putting out three 30- gallon bags per week would pay about \$200 for bags or stickers for a total of \$350 -\$410. Based on the most recent annual tonnage (7,000) collected in Maplewood, the average household would pay between \$270 and \$330 per year. The savings will be greater for households that are able to reduce their waste stream.

Estimated Household Cost for Maplewood PAYT System

Item (per year)	Cost per Household
Household Collection	\$125-190 ¹
Administrative Cost	\$20
Total Cost for Collection	\$145-210

Light User

Cost for Bags (two 13-gallon bags per week)	\$75
Total Cost (two 13-gallon bags per week)	\$220-285

Heavy User

Cost for Bags (three 30-gallon bags per week)	\$200
Total Cost (three 30-gallon bags per week)	\$345-410

Summary of Estimated Costs:

Item (per year—rounded to \$50,000)	Cost
Household Collection	\$800,000-1,250,000
Administrative Cost	\$150,000
Bags (covers tipping cost) ²	\$750,000
Total Cost for Collection & Tipping	\$1,700,000-2,150,000

Total Cost of Current System³ \$2,600,000

Savings \$450,000 – \$900,000

1. Chatham's cost for standard plus rear-yard pickup is \$126 per year. Glen Ridge's all rear-yard pickup is \$190. The actual cost and fee would be determined by the results of competitive bidding.

2. Assumes 6,500 households generating 7000 tons of refuse.

3. Assumes 6,500 households paying an average of \$400 per year, including the purchase of bags. .

4. Current cost of garbage collection in Maplewood ranges from \$230 per year (one can, picked up once per week) to \$445 per year (two cans, twice a week), with an average assumed cost of about \$400 per year, including the cost of bags. This multiplies out to \$2,600,000 for 6,500 Maplewood residences. The proposed system would cost those same 6,500 residences about \$1,700,000 - \$2,150,000, for a town-wide savings of \$450,000 - \$900,000 (17% - 35% lower than current costs).

Potential Recycling Improvements in 2013

Maplewood's current recycling collection contract runs through the end of 2012. The township is receiving revenue from the sale of recycled materials at a rate that varies with the market but currently covers the cost of collection. Possible improvements may include: purchasing large wheeled recycling bins for each household, instituting weekly pickups, and extending the pickup to small business and municipal addresses. These options would be considered in the context of the expected revenues from the sale of recycled materials.

Environmental Benefits

Towns that have switched to per-bag PAYT systems report significant reductions in garbage disposal and increases in recycling. Analysis published in *Resource Recycling* magazine this February* claims that pay-as-you-throw systems on average reduce garbage disposal 17%, with the reduction coming about 1/3 each from source reduction, increased recycling, and composting. A 17% reduction in Maplewood's garbage would represent about \$100,000 in reduced disposal costs at the Essex incinerator (since this reduction is speculative, it has not been included in the financial analysis of the proposal). If 1/3 of the reduction were a diversion into recycling, it would represent a 15% increase in recycling (with the added revenue going to the township).

Waste reduction is one of the most effective environmental measures available. If Maplewood were to achieve even a 10% reduction in garbage disposal along these lines, it would result in avoided greenhouse gas emissions of over 5 million pounds of carbon dioxide equivalent. This would represent an almost 1% reduction in overall greenhouse gas emissions towards Maplewood's 20% reduction target for 2015. The greenhouse gas reduction is enormous: equivalent to reducing gasoline consumption by more than 200,000 gallons (equivalent to avoiding driving 4 million miles in a minivan or 10 million miles in a Prius), avoiding 250 million plastic shopping bags, or the greenhouse gas savings from over 4 megawatts of solar generation (800 homes with 5 kW solar installations or least 6 acres and \$10 million worth of solar panels). While harder to quantify, there would also be major reductions in other emissions and lowered stress on scarce resources, notably water.

Achieving the Goals

The proposed system will meet the township's goals by:

- providing cost incentives for residents to reduce the trash they throw away
- reducing overall costs with the competitively bid single contract and with the improved operational efficiency of combining public waste collection with private
- maintaining existing convenience by continuing rear yard collection (and by making provision for improved recycling pickup in 2013).
- substituting township responsibility for municipal trash collection with modest new responsibility for billing and contractor oversight.

* Skumatz, Lisa et al., "Recycling Incentives," *Resource Recycling*, Feb. 2011

** NJDEP, "PAYT in New Jersey" http://www.state.nj.us/dep/dshw/recycling/source_red.htm January 2011, verified by telephone interviews with municipal representatives.