

Door Hangers and Door-to-Door Visits

Testing Strategies to Promote Participation in Curbside Recycling

Prepared for the Massachusetts Department
of Environmental Protection and the Town of
Randolph

Prepared by Aceti Associates and the Town of
Randolph Recycling Staff

December 2005

Table of Contents

	page
Background.....	3
The North Randolph Recycling Campaign: Door-to-Door Visits.....	5
Objective 1: Recruit Community Groups to Do the Visits as a Fundraiser...	6
Objective 2: Talk with 70% of Householders.....	9
Objective 3: Decrease Costs.....	15
Objective 4: Explore Private Sector Funding.....	17
Evaluation.....	19
Results.....	22
Lessons Learned/Recommendations.....	24
Conclusion.....	24
The East Randolph Recycling Campaign: Feedback and a Neighborhood Reward.....	26
Objective 1: Decrease Costs.....	27
Objective 2: Increase Private Sector Funding.....	27
Objective 3: Decrease Staff Time Needed for Door Hanger Distribution.....	28
Evaluation.....	29
Results.....	29
Lessons Learned/Recommendations.....	30
Conclusion.....	30
Lessons Learned/Recommendations That Apply to Both Campaigns.....	31

Note: The appendices that are referenced in this report are available as a companion document. Both this report and the appendices are available in electronic form at <http://www.acetiassociates.com/publications.html>.

Funding for the North Randolph Recycling Campaign was provided by the Massachusetts Department of Environmental Protection, the Randolph business community and the Town of Randolph Board of Health.

Funding for the East Randolph Recycling Campaign was provided by the Town of Randolph Board of Health and the Massachusetts Department of Environmental Protection.

If there are questions or comments on this report, please contact:

Jan Aceti
 Aceti Associates
 19 Allen St. #2
 Arlington, MA 02474
 Ph: 781-646-4593
 Fax: 914-931-2038
jan@acetiassociates.com
www.acetiassociates.com

Background

In 2005, the Town of Randolph, Massachusetts tested two strategies for increasing participation in curbside recycling. Each strategy was a less expensive version of the Oakdale Neighborhood Recycling Campaign, piloted in the Town of Dedham, Massachusetts in 2004. The Oakdale Neighborhood Recycling Campaign involved sending recycling volunteers door to door in a neighborhood in Dedham to answer residents' questions about how, what and why to recycle. The volunteers also asked residents to make a commitment to recycle, and provided them with information on where Dedham's recyclables go after they are picked up and what they are remanufactured into. In addition, a donation was solicited from a local bank that would be used to purchase trees to be planted at a local elementary school if a neighborhood recycling goal were met. Seven door hangers were distributed to households in the neighborhood during the three month campaign, showing people the progress being made towards the goal.

The Oakdale Neighborhood Recycling Campaign resulted in a 16.8% increase in recycling tonnage during the three month campaign period, compared to another, similar part of Dedham where no outreach was done. The tonnage collected in the neighborhood and in the comparison area was also monitored for seven and a half months after the campaign ended. Throughout those months, the behavior change that endured was a consistent 10.5 % increase in recycling tonnage. A full report on the Oakdale Neighborhood Recycling Campaign can be found at <http://www.acetiassociates.com//publications.html>.

While the pilot project in Dedham demonstrated that it is possible to increase recycling participation with a campaign of this type, substantial expense and staff time were involved. The pilot projects in Randolph were designed to assess the effectiveness of two simplified and less expensive versions of the Dedham strategy. The North Randolph Neighborhood Recycling Campaign involved sending recycling volunteers door-to-door, but did not set a neighborhood goal, or provide feedback or a reward to the neighborhood. The East Randolph Neighborhood Recycling Campaign, on the other hand, featured a neighborhood goal, feedback and a reward, but no door-to-door visits.

As Table 1 shows, not only are the outreach strategies employed in Randolph different than in Dedham, but the population exposed to the strategies is different, too. This fact does somewhat limit our ability to conclude that a strategy that works in Randolph would be equally successful in Dedham, or that a strategy that didn't work in Randolph wouldn't have worked in Dedham either. However, we anticipated being able to accurately compare the effectiveness of the North and East Randolph campaigns to each other. Further, we expected that if some of the techniques we tested in Randolph for increasing volunteer

recruitment, etc., were effective, they could be used to improve the Oakdale Campaign.

Table 1: Dedham and Randolph Demographics

Demographic	Dedham	Randolph
Population	23,500	30,963
# Households	8,700	11,313
% Single Family Homes	86%	61.9%
% Owner Occupied Housing	79%	72.3%
Ethnicity	94.5% White 1.5% Black 1.9% Asian	62.8% White 20.9% Black 10.2% Asian
Median Household Income	\$62,591	\$55,255
% with College Degree	32%	26.6%
2004 Recycling Rate	27%	17%

The North Randolph Recycling Campaign: Door-to-Door Visits

This strategy consisted of door-to-door visits to residents by volunteers. It also utilized neighborhood-wide publicity to enhance the credibility of the door-to-door campaign. The publicity included a door hanger and a letter delivered to residents announcing the upcoming visits, as well as sandwich board signs placed around the neighborhood and notices sent home with school students.

The goal of the campaign was to improve participation in the Town's curbside recycling program by overcoming lack of knowledge about how and what to recycle, by overcoming a perception of recycling as inconvenient, by increasing people's motivation to recycle and by improving people's understanding that recycling really does make a difference.

Recycling volunteers overcame lack of knowledge and inconvenience by:

- ♦ Answering questions about how and what to recycle;
- ♦ Reading through a list of materials accepted in the program, in case the resident was unaware of any of them (we found that almost half the people we talked to in Dedham were unaware of one or more materials accepted in that town's recycling program);
- ♦ Making sure people had as many recycling containers as they needed to store their recyclable material between pick up days;
 - If they didn't, offering people a "Recyclables" sticker to place on a container of their own choosing or delivery of a town-issued recycling bin later that day;
- ♦ Checking to make sure people weren't following outdated preparation requirements, thus making recycling harder than it is; and
- ♦ Conveying information about recycling in person, rather than through brochures or flyers. Research on persuasion indicates that the major influence upon our attitudes and behavior is our contact with other people.¹

Recycling volunteers increased motivation by:

- ♦ Asking people to sign a pledge to begin recycling items they hadn't known were recyclable or to continue recycling everything they could;
- ♦ Asking people for permission to publish their name in the regional newspaper, the Patriot Ledger, in order to make the commitments public;
- ♦ Mentioning the tax dollars saved when trash is recycled rather than thrown away; and

¹ McKenzie-Mohr, D. & Smith, W. (1999). *Fostering Sustainable Behavior: An Introduction to Community-Based Social Marketing*. New Society Publishers: British Columbia, Canada.

- ♦ Asking residents if they would continue recycling new items even after the campaign was over.

Recycling volunteers demonstrated that recycling makes a difference by:

- ♦ Showing people photos taken at the recycling facility;
- ♦ Showing people a map displaying where Randolph's recyclables go for remanufacturing;
- ♦ Describing what Randolph's recyclables get made into; and
- ♦ Pointing out the "EcoSpun" t-shirt that the volunteer was wearing as another tangible example of a recycled product.

Campaign Objectives

In order to achieve the goal of cost effectively increasing recycling by maximizing the effectiveness of the strategy and minimizing its cost and time requirements, four main objectives were laid out. The following sections describe the campaign objectives, along with the results and lessons learned.

Objective 1: Recruit a community group (or groups) to do the visits as a fundraiser

Our first objective was to test a different method of recruiting outreach volunteers, with the hope of increasing the number of volunteer hours contributed to the campaign while reducing the time needed for recruitment. Recruiting a group (or groups) whose members then carry out the door-to-door visits should take less time than recruiting volunteers one by one, as we did in Dedham.

Our experience with the Oakdale Campaign indicated that we would need to increase the stipend offered to volunteers if we hoped to be successful in persuading a group to take on this project as a fundraiser. In the Oakdale Campaign, we offered volunteers a stipend of \$10 per hour. In Randolph, we paid community groups \$37.50 for each hour worked by one of their members. This payment rate allowed a group to earn \$1,000 in about 25 hours. We speculated that this return on the time they invested would be appealing enough to entice groups to take part.

Identifying Potential Partner Organizations

We used several sources to identify potential partner organizations: lists of churches, clubs and organizations in the Randolph Town Phone Book, and advice from the Randolph Recycling Committee, the Randolph Chamber of Commerce and Randolph Town Meeting members.

Recruiting Potential Partner Organizations

Table 2 displays the wide variety of partner groups to which we reached out in Randolph.

Table 2: Potential Partner Groups

School Groups	High School National Honor Society High School Sports Boosters Randolph High School PTO Randolph Middle School PTO Tower Hill School PTO Lyons Elementary School PTO Kennedy Elementary School PTO Young Elementary School PTO
Civic Organizations	Lions Club Rotary Club Randolph Junior Women’s Club Human Relations Committee (works on providing constructive after school activities for youth) Friends of the Turner Library Hilltop Humane Society South Shore Humane Society
Churches	Trinity Episcopal Church Temple Beth David St. Mary’s Catholic Church St. Bernadette’s Catholic Church Temple Beth Am First Baptist Church First Congregational Church Young Israel Kehillath Jacob
Youth Sports Leagues	Babe Ruth Baseball Randolph South Little League North Randolph Little League Youth Hockey Youth Soccer Ice Angels Little Wonders Tots Skating Program Commonwealth Figure Skating Club
Scouts	Girl Scouts Boy Scouts
Social Clubs	VFW Randolph Lodge of Elks

In all, we offered this fundraising opportunity to thirty-five different groups. The written promotional materials used in our recruitment efforts can be found in Appendix C. Five groups, or 14% of those approached, chose to become involved in the North Randolph Recycling Campaign as door-to-door recycling volunteers. They were the:

- ♦ National Honor Society;
- ♦ Lions Club;

- ♦ Randolph Junior Women's Club;
- ♦ Trinity Episcopal Church Youth Group; and
- ♦ Boy Scouts

High School National Honor Society students are required both to do a community service project each month, and to raise money to donate to charity. Therefore, this particular group has two different incentives to become involved in a project like this. The group chose to use the recycling campaign as a fundraiser, but it is worth noting that if the timing had been somewhat different, they may have taken it on as a community service project, lowering the overall project costs.

The General Federation of Women's Clubs (GFWC), of which the Randolph Junior Women's Club is a chapter, is dedicated to community improvement through volunteer service. Through their Resource Conservation Program, the GFWC attempts to educate members and communities about the importance of preserving natural resources and to stimulate citizen action to address these concerns. Thus, the North Randolph Recycling Campaign was an excellent match for their interests and allowed them to raise funds for their organization as well. The Randolph Junior Women's Club worked over half of the total volunteer hours donated by the campaign's partner organizations.

In addition to the contributions of time made by our partner organizations, a member of the Randolph Recycling Committee donated 4.5 hours of outreach volunteer time to the campaign for which she was not compensated monetarily.

A number of trends emerged among groups who declined to participate. School PTOs tended to have annual fundraising events already in place. Further, they often had sufficient funds on hand for their needs, but had only very small core groups of active members who could be called upon to volunteer for a new activity. While some of the youth sports leagues were more in need of funds, they were also run by parents who were stretched very thin. Although the recycling campaign staff encouraged the young athletes themselves to participate as recycling volunteers, it was important that they be accompanied by adults. The VFW, while supportive, had a high percentage of elderly members who were not able to walk door-to-door for several hours at a time.

One group, the High School Chorus Boosters, became involved in the campaign after hearing about this fundraising opportunity from others and contacting us to express interest. This raises the possibility that if a project such as the North Randolph Campaign is conducted in a different section of the community each year, word of mouth will grow and more groups will come forward to express interest in being involved. Further it is possible that some groups will adopt the campaign as an annual fundraiser. In fact, several of our partner organizations in Randolph expressed interest in being involved in future campaigns. These developments would drastically reduce the amount of time needed to recruit

partner organizations. It is not clear, however, that this first round of partner group recruitment was less time consuming than recruiting volunteers one by one, as we did in Dedham. The process of recruiting partner organizations took about two months of elapsed time.

Objective 2: Talk with a householder at 70% of the addresses on the test route.

Our second objective was to improve the cost effectiveness of the door-to-door visits by reaching a higher percentage of the addresses on the route than we had in Dedham. It seemed reasonable to assume that the greater the percentage of residents we talked with, the greater the increase in tons recycled. A larger volunteer base was the main method employed to achieve this objective.

In the Oakdale Recycling Campaign, we spoke with someone at 47% of the homes on the test route. In order to accomplish this, we knocked on virtually every door on the test route once, and went back a second time to about a quarter of the households on the route where no one was home the first time. In a somewhat similar project carried out in the City of Cambridge, MA, volunteers achieved a contact rate of 70% by visiting each household up to three times, if no one was home on a previous visit.² We aimed for a 70% contact rate in North Randolph.

On a 700-household route in Dedham, volunteers devoted 49 hours to the Oakdale Campaign and project staff devoted 9, for a total of 58. Based on this experience, we needed an estimated 108 volunteer-hours in order to reach someone at 70% of the households on a 900-household route in North Randolph. So, our recruitment efforts needed to be substantially more successful than they were in Dedham in order to achieve this objective. We took the following steps in order to make our volunteer recruitment more successful:

- ♦ Recruiting carefully selected youth groups. We chose not to approach youth groups in Dedham because of concerns that many teenagers would not be mature enough to negotiate a persuasive conversation with a stranger. In Randolph, we tested the feasibility of employing teenagers as door-to-door volunteers, by selecting groups that would be considered leaders.
- ♦ Making it easier for people to fit a volunteer shift into their schedules by:
 - Making the outreach schedule more flexible. In Dedham, we had three fixed time slots for which we recruited door-to-door volunteers. These were 10am – 12pm on the first Saturday in May, 12pm-2pm on the second Saturday in May and 2pm – 4pm on the third Saturday in May. In North Randolph, we experimented with staffing a base camp for a longer time period on a weekend day, and allowing volunteers to come

² City of Cambridge. (2003, August). Community-Based Recycling Outreach Participation Project. Report Prepared for the Massachusetts Department of Environmental Protection. P14.

in, pick up outreach materials and do a 1 or 2-hour shift at any point during that time period.

- Holding at least one door-to-door outreach day in late April. People's schedules become busier in May because of team sports and weekend vacations.
- ◆ Decreasing volunteer attrition. In Dedham, there was volunteer attrition at two points. Some individuals who had agreed to volunteer did not attend the volunteer training session, nor show up for their volunteer shift. Some volunteers who attended the training session did not show up for one or more shifts that they had agreed to do. In Randolph, we hoped to decrease volunteer attrition by encouraging the community groups with which we partnered to publicize a volunteer roster, showing who was going to volunteer, when, and for how many hours. We speculated that if group members felt accountable to each other, they would be more likely to follow through on their volunteer commitment.

The following sections describe the outcome of each step we took to make our volunteer recruitment more successful in Randolph:

Recruiting youth groups

Four of the six groups involved in the North Randolph Campaign were composed of individuals under 18 years of age. For their safety, they typically worked in pairs, or were accompanied by an adult, or both. The Boy Scouts were 11 – 13 years of age, the Church Youth Group members were 13-15 years old, and the National Honor Society members were 16 and 17. One member of the High School Chorus Boosters, probably aged 15 or 16, was involved in the campaign. Overall, youth groups contributed 43% of the total outreach hours worked in the campaign.

Making it easier for people to fit a volunteer shift into their schedules

A staffed home base located in North Randolph was available to volunteers during the following time periods:

Saturday, May 7	10am – 5pm
Saturday, May 14	10am – 5pm
Sunday, May 15	1pm – 5pm
Saturday, May 21	10am – 5pm
Sunday, May 22	1pm – 5pm

The intent had been to conduct outreach on two Saturdays and two Sundays. However, heavy rain fell during most of the day on Saturday, May 7, which understandably deterred most of the volunteers who had signed up to go door-to-door on that day. The home base was staffed for an additional Saturday to allow volunteers another opportunity to complete the outreach hours they had committed to.

There was no suitable public building near the target area that was accessible on weekends, so a Dunkin Donuts/Togos/Baskin Robbins restaurant agreed to provide several tables to project staff during the outreach periods. The restaurant benefited from food and beverage purchases made by both volunteers and staff.

Volunteers arrived at the home base to pick up outreach materials and a list of addresses to cover. After completing their outreach hours, they returned to the home base in order to drop off unused materials and a record of the visits they had made to each household on their list. While many volunteers arrived early in the period during which the home base was staffed on a given day, some did not. It did appear that providing more flexible outreach hours for volunteers was worthwhile. With the aid of a laptop computer and some pre-prepared paper forms, staff used downtime at the home base to carry out necessary tasks such as:

- ♦ updating the master address list to reflect the visits made;
- ♦ calculating outreach statistics by volunteer;
- ♦ emailing residents' questions and requests to town staff to be followed up later; and
- ♦ compiling requests for bin deliveries.

Further, volunteers who were unable to attend a comprehensive training session received an abbreviated training at the home base before their outreach shift. In future campaigns, downtime at the home base can also be used by staff to make computerized entries of the names of residents who gave permission for their names to be published in the newspaper. This will facilitate the design of a newspaper advertisement to be published as soon as possible after the outreach campaign.

Holding at least one door-to-door outreach day in late April

While holding at least one door-to-door outreach day in late April was a good idea, it did not turn out to be logistically possible. A town wide clean up had previously been scheduled for Saturday, April 16th, involving town staff and many volunteers. Further, Passover occurred from Saturday, April 23rd – Saturday, April 30th. Since North Randolph has a sizeable Jewish population, these Saturdays were not appropriate days for door-to-door visits.

Decreasing Volunteer Attrition

In both Dedham and Randolph there was some attrition among volunteers. In Dedham, we recruited volunteers one by one, identifying potential volunteers through referrals and through information about people active in the civic life of the community. In Randolph, we recruited groups. To the extent that we could, we asked groups to publicize the volunteer commitments of each member, thinking that that would make people more willing to follow through, in order to meet the group's fundraising goal. It is likely that at least several of them did this, but it is not clear how many or which ones.

When we could, we also asked our contact in each group to place reminder calls/emails to members a day or so before their outreach shift was scheduled to take place. As with the volunteer roster, we don't know how often this occurred. These steps, along with the high monetary incentive, were intended to improve upon the follow through rate in Dedham. However, working with individual volunteers in Dedham did have the advantage that project staff had direct contact information for the volunteers and could ensure that reminder calls were made. Interestingly, as shown in Table 3, the follow through rate ended up being exactly the same for both methods.

Table 3: Volunteer Follow Through in Dedham and Randolph

Recruitment Procedure Used	Percent of Time Pledged Actually Worked
Individuals Recruited (Dedham)	66%
Groups Recruited (Randolph)	66%

Volunteer follow through was not the same for all groups. Some groups followed through on 100% of their commitment; most didn't. Table 4 shows the follow through by group.

Table 4: Volunteer Follow Through by Group

Organization	Percent of Time Pledged Actually Worked
Church Youth Group	100%
National Honor Society	100%
Boy Scouts	70%
Lions Club	68%
Randolph Junior Women's Club	56%
High School Chorus Boosters	29%

Because the High School Chorus Boosters became involved at the very tail end of the campaign, it is likely that lack of time may have hampered their efforts to effectively recruit and organize members. The follow through rate for the partner organizations that were recruited prior to the campaign would be a more useful benchmark. However, because the Chorus Boosters contributed so few hours to the campaign overall, the overall volunteer follow through rate improves by only a few percent if the Boosters' rate is excluded from the calculation.

Table 5 summarizes the results of our efforts to make contact with a higher percentage of householders in Randolph than we had in Dedham.

Table 5: Comparative Outreach Statistics for Dedham and Randolph

	Dedham	Randolph
Population/Sq. Mi.	2,244.6	3,075.2
People Talked to as % of Housholds on Route	47%	58%
No. of Households on Route	716	864
Number of Outreach Hours Worked	49 (58) ¹	78
Doors Knocked On/Hour	14.9	16.2
People Talked to as % of Doors Knocked On	39%	38%
People Talked To/Hour	5.9	6.2
Commitments as % of People Talked To	87%	65%
Commitments as % of Households on Route	41%	36%
Public Commitments as % of People Talked To	64%	37%
Public Commitments as % of Hshlds on Route	30%	21%

¹Fifty-eight hours were worked in total in Dedham, but nine of these were worked by project staff. Forty-nine hours were worked by volunteers.

Although, we did not succeed in talking with a householder at 70% of the addresses on the test route in Randolph, we did speak to someone at 58% of households, a higher percentage than we achieved in Dedham. Ultimately, 78 volunteer hours were worked, falling short of our goal of 108 volunteer hours. However, partnering with community groups enabled us to recruit almost 60% more volunteer hours than we had been able to sign up in Dedham.

In addition to gauging the effectiveness of the steps we took to make our volunteer recruitment more successful, we learned a number of other lessons about employing volunteers to do door-to-door visits. Our volunteers were able to knock on about 15 or 16 doors per hour and almost 40% of the time, someone answered the door, which was virtually the same as what we saw in Dedham. When someone did answer the door, the conversation that ensued might have been as short as “Thank you, I’m not interested,” or as long as a 15 minute conversation about recycling. On average, our volunteers were able to talk with about 6 people per hour.

One problem that arose as a result of expanding the pool from which we recruited volunteers was that some outreach volunteers, and some partner organizations overall, did a significantly poorer job of obtaining commitments from residents than did the volunteer force in Dedham. As a result, volunteers in Randolph gained commitments from only 65% of the people they talked to, compared to 87% in Dedham.

Table 6 displays how well each of the different groups, adult and youth, did in obtaining commits to recycle from the people they talked to.

Table 6: Percentage of Commitments Gained by Group

Organization	Commitments Gained as % of People Talked To
Trinity Episcopal Church Youth Group	87%
Lions Club	87%
National Honor Society	72%
Junior Women's Club	59% (80%)
Boy Scouts	46%

The figure above for the Trinity Episcopal Church Youth Group is approximate, as some members did not properly fill out record sheets in the field. However, indications are that the youth group did a better-than-average job of gaining commitments to recycle from the individuals with whom they spoke. Interestingly, commitments gained by the Church Youth Group and by the Lions Club as a percentage of people talked to matched the overall level achieved by the outreach volunteers in Dedham.

The Randolph Junior Women's Club (RJWC) had one member who contributed 42% of the total hours worked by the group, but who didn't seem to be comfortable requesting commitments from the individuals with whom she spoke. If her efforts are excluded, the RJWC was on par with the better performing groups. Of all the groups we worked with, we did conclude that the boy scouts, at ages 11 to 13, were a little too young to effectively negotiate these types of conversations with strangers. The number of commitments they gained from people was significantly lower than that of the other groups.

Both the RJWC member and the Boy Scouts did outreach on more than one day. We calculated the percentage of commitments gained by each volunteer on their first outreach day. For those doing substantially less well than other volunteers, we provided some coaching prior to sending them out again. For the Boy Scouts, this coaching seemed to result in a modest improvement in the percentage of commitments gained. For the RJWC member, there was a further, dramatic drop in the percentage of commitments gained after the coaching occurred. It is unclear why. Possibilities are that the coaching somehow confused her further, or that as time went on, the motivation to make the effort to request a commitment decreased even further.

It is possible that more intensive intervention, in the form of role playing, may have avoided confusion and allowed a more precise diagnosis of the problems being experienced by these volunteers. In future campaigns of this sort, it is recommend that program coordinators be prepared to provide this type of intensive coaching in order to help volunteers.

In the end, despite the fact that we talked to a higher percentage of residents in the campaign area in Randolph than we did in Dedham, the percentage from

whom we gained a commitment to recycle was lower (36% compared to 41%). The percentage of households making public commitments was lower in Randolph, also.

As illustrated in Table 1, there are differences between the Towns of Dedham and Randolph in terms of demographics and recycling rate. It's possible that these differences may have somehow influenced people's willingness to make a commitment to recycle. However, given that some Randolph volunteers obtained the same percentage of commitments as Dedham volunteers, it is more likely that the volunteer force rather than the population made the difference.

One drawback of working with young volunteers is the extra work involved in preparing outreach materials for volunteers working in pairs. In order that each partner in an outreach team be able to participate fully, we prepared two full sets of materials for volunteers working in pairs. Despite this drawback, our conclusion is that it is feasible and worthwhile to involve young people who are at least 13 years of age.

Objective 3: Decrease Costs

Our third and fourth objectives aimed to deliver an effective program at a lower cost than the Oakdale Campaign.

Even taking into account the higher volunteer stipends, the budgeted cost of the door-to-door outreach strategy was expected to be 10% less than that of the full Oakdale Recycling Campaign. The actual monetary costs of carrying out the North Randolph Recycling Campaign on a recycling route of 864 households are shown in Table 7. The total cost of \$5,522.58 worked out to \$6.39 per household. This per household cost for the North Randolph Campaign was 21% lower than the per household cost for the Oakdale Neighborhood Recycling Campaign, even lower than expected based on the initial budgeted cost of the North Randolph Campaign.

Table 7: North Randolph Campaign Budget

Budget Item	Cost
Payments to Partner Organizations [1]	\$2,793.75
Newspaper Advertisement [2]	\$802.00
Volunteer T-shirts [3]	\$698.84
Announcement Letter [4]	\$452.13
Outreach Materials and Supplies [5]	\$180.90
Door Hanger Distribution [6]	\$180.00
Door Hanger Printing [7]	\$130.00
Commitment Cards [8]	\$107.00
Sandwich Board Signs [9]	\$89.00
Gifts for Training Session Attendees [10]	\$53.73
Refreshments for Volunteers	\$41.21
Notices Sent Home with School Students [11]	\$39.02
TOTAL	\$5,567.58

[1] In addition to the 74 outreach hours for which partner groups were compensated, a member of the Randolph Recycling Committee donated 4.5 uncompensated outreach volunteer hours. \$2,075 of the above amount paid to partner organizations was raised from the Randolph business community.

[2] The ad in the Patriot Ledger thanked the campaign sponsors and campaign partners, and recognized the North Randolph residents who pledged to recycle and who gave us permission to publish their name in the newspaper. The ad was 2 columns wide and 10.5 inches long. The cost was \$38.21 per column inch.

[3] T-shirts were printed for each partner organization with the name of the Randolph business sponsoring them. This meant that six separate batches of t-shirts needed to be printed, with a set up charge for each one. In all, 69 t-shirts were purchased. See Appendix G for t-shirt specifications.

[4] A letter informing residents of the upcoming door-to-door visits was mailed to each household. Postage was \$333, paper and envelopes cost \$63.91 and printing cost \$55.20.

[5] Clipboards made from recycled plastic, plastic sleeves for photos, metal rings for making photo albums, ziploc bags for holding outreach materials and to serve as rain curtains for material on clipboards.

[6] \$270 was budgeted to pay 6 people \$45 each to distribute door hangers in North Randolph. However, the distribution cost was only \$180 because two of the six individuals opted to receive community service credit in lieu of payment.

[7] 1,050 copies of a 4.25" x 11" double sided door hanger. See Appendix G for specifications.

[8] See Appendix G for commitment card specifications.

[9] See Appendix G for sandwich board sign specifications.

[10] A compact fluorescent light bulb was purchased for each training session attendee. Miniature recycling bins were provided to recycling game show winners at the training session. These were donated at no charge by Signature Marketing, the vendor for the t-shirts.

[11] 307 double sided notices on 8 1/2" by 11" paper.

Objective 4: Explore Private Sector Funding

In the North Randolph Campaign, our goal was to raise sufficient funds from the Randolph business community to cover the payments made to community groups for the time their members donated as outreach volunteers. If we were able to achieve this goal, the cost of the door-to-door visits would be half the cost of the Oakdale Campaign, even after private sector funding raised for the Oakdale campaign was subtracted.

We succeeded in raising \$2,075, or 74% of the \$2,793.75 in funds needed to cover these payments. Three real estate brokers, two insurance agencies, a copy center and a massage therapy center made donations to the campaign. One \$900 donation was made by a real estate firm. One \$300 donation, three \$225 donations, and two \$100 donations made up the balance. Table 8 displays the number of businesses that we approached by sector, and our success rate.

Table 8: Fundraising Results

Business Sector	Number Approached	Number Donating	Percent of Those Approached Who Donated	Amounts Donated	Percent of Total Funds Donated
Real Estate Firms	6	3	50%	\$900 \$300 \$225	68.7%
Insurance Agencies	7	2	29%	\$225 \$100	15.7%
Copy Centers	1	1	100%	\$225	10.8%
Massage Centers	2	1	50%	\$100	4.8%
Banks	8	0			
Restaurants	4	0			
Lawyers	3	0			
Landscapers	2	0			
Fitness Clubs	2	0			
Dance Schools	2	0			
Autobody Shops	2	0			
Event Facilities	2	0			
Dry Cleaners	1	0			
Grocery Stores	1	0			
Constr. Contractors	1	0			
Jewelers	1	0			
Moving Companies	1	0			
Interior Design Cos.	1	0			
Mortgage Firms	1	0			
Computer Retailers	1	0			
DJs	1	0			
Manufacturers	1	0			
Bike Shops	1	0			
Frame Shops	1	0			
TOTAL	54	7	13%		

We used four main sources of information to identify potential donors.

- ♦ Internet white and yellow pages, which provided lists of businesses in various sectors.
- ♦ A Randolph Chamber of Commerce newsletter, which listed the current 13-member slate of officers and their companies. It also listed 18 members of Chamber Boards of Directors for 2005, 2006 and 2007. Finally, the newsletter featured a substantial number of business advertisers.
- ♦ Referrals
 - Several partner organizations and Randolph Recycling Committee members provided us with names of businesses that are active in the community.
 - Several businesses were able to fund part of the payment owed to a partner organization, but not the entire amount. Because co-sponsors' names would be featured together on volunteers' t-shirts, we asked these donors to suggest names of businesses in other sectors with whom they would be comfortable being paired.

The package of benefits that we offered to businesses in return for a donation is described in our fundraising promotional material, included in Appendix B. Most of our fundraising began with an initial verbal pitch over the phone. In some cases, this pitch alone resulted in a donation. For these donors, and for businesses that were interested but that couldn't make a commitment on the spot, we followed up by sending the promotional material.

The number of businesses that we approached in any given sector was small, so the percent of those approached who donated cannot be used as a reliable guide in future campaigns. However, as a general conclusion, it is worth noting that compared to other sectors where we made a similar number of inquiries, the real estate sector contributed disproportionately to our campaign. Even without the \$900 contribution from one firm, the other contributions from real estate firms amounted to more than was donated by any other sector. It is possible that the advertising benefits we offered in return for a contribution were more appealing to this sector for some reason. A more probable explanation is that the real estate sector was better positioned economically than the others to make charitable contributions.

When the costs covered by private sector donations are subtracted from the campaign budget, the net cost of the campaign for 864 households was \$3,492.58, or \$4.04 per household. The net per household cost for the North Randolph Campaign was 30% lower than the net per household cost for the Oakdale Neighborhood Recycling Campaign, adjusted to account for private sector donations.

Evaluation

The North and East Randolph Recycling Campaigns were designed as small-scale tests of the effectiveness of these outreach strategies. The following sections pertain to the evaluation of both the North and East Randolph Campaigns.

Choosing Test and Control Routes

Each campaign was implemented on one recycling route in Randolph, which we refer to as the “test” routes. It was important to monitor changes in the tonnage collected not only on the test routes where the recycling campaigns were carried out, but also on a comparison, or “control” route, on which no outreach was done. Monitoring the tonnage on a control route provided information about changes in recycling tonnage that occurred due to factors other than the strategies being piloted. These factors might include seasonal fluctuations in recyclables tonnage, or fluctuations due to changes in the economy. In evaluating the effectiveness of the recycling campaigns, it was important to subtract out any change observed on the control route, since it would be due to factors other than the strategy.

Of the ten recycling routes in Randolph, the Tuesday B, Thursday B and Friday B routes best met the criteria needed to ensure a smooth implementation and valid evaluation of the pilots.

Table 8: Test and Control Route Characteristics

Criteria	North Randolph Test Route (Friday B)	Control Route (Thursday B)	East Randolph Test Route (Tuesday B)
Collected in Same Week	Yes	Yes	Yes
Low Numbers of Toter Buildings	Yes	Yes	Yes
Ease of Door Hanging and Door-to-Door Visits	Good	Not Applicable	Good
Excess Truck Capacity	Yes	Not Applicable	Yes
Pre-Pilot Set Out Rate ³	54%	56%	53%
Median Household Income	\$55,520	\$56,318	\$55,314
Avg. Household Size	2.82	2.81	2.74
% Owner Occupied	86%	76%	76%
% with College Degree	15%	16%	18%
% White Residents	69%	58%	59%
% African-American Residents	22%	22%	27%
% Asian Residents	6%	10%	8%

³ Pre-pilot set out rates were determined from a single measurement. Ideally, pre-pilot set out rate would have been calculated by averaging the measurements from several collection days. However, multiple measurements could not be obtained.

Criteria	North Randolph Test Route (Friday B)	Control Route (Thursday B)	East Randolph Test Route (Tuesday B)
Anecdotal Impressions of a Member of the Board of Selectmen	Newer development, politically progressive, professional, white collar, not a lot of kids.	Mixture of old and new, large and small homes. Has more older and smaller houses than Friday B. Relatively more diverse than Tuesday B or Friday B routes. More "newcomers" (people living there less than 15 years) than Tuesday B. Generally not very politically active except on school issues.	Older neighborhood, more congested, blue collar, less politically progressive.

If the test and control routes were picked up in opposite weeks, collection delays due to holidays would affect the amount set out on one route but not the other. Therefore, it was important that the test and control routes be picked up in the same week. Apartment buildings that use totes for recyclables storage are generally inaccessible to recycling volunteers or door hanger distributors going door to door. Therefore these buildings were excluded from the campaigns. Because each recycling route has different numbers of these buildings, their lack of participation in the campaigns would dampen any change in tonnage on the route to a different degree. In order to take this factor into account, the recycling truck driver was asked to report on the number and fullness of totes picked up on each of these routes on each collection day. It was only feasible to use this reporting system on routes with small numbers of totes.

It was also important that door hanger distribution and door-to-door visits on the test routes be straightforward. Project staff wanted to avoid a situation in which undue challenges might lead to difficulties implementing the strategy properly. In this case, if little or no tonnage change were observed on the test route, it might be impossible to tell if the weak pilot results were due to implementation problems or to an ineffective strategy.

The project staff also wanted to avoid choosing a route in which an increase in tonnage would lead to the need for a large amount of driver overtime. Such a situation might lead to operational or contractual difficulties that could jeopardize the success or even the completion of the pilots. Finally, the hope was that if factors other than the strategy affected the tonnage on the test and control routes, choosing routes with similar demographics and similar levels of pre-pilot participation would increase the likelihood that the two routes would be affected similarly.

However, demographic statistics provided by the US Census may not provide a complete picture of the test and control areas. Project staff met with a member

of Randolph's Board of Selectmen who has done extensive door-to-door campaigning town-wide. His impressions, while strictly anecdotal, were that the test and control areas are more different from each other than the census figures suggest. Unfortunately, careful consideration of the ten recycling routes did not yield a better set of test and control routes than the one described above. However, based on the possibility that a more politically progressive neighborhood might be more open to more in-depth recycling information, project planners did choose to carry out the door-to-door visits on the Friday B route rather than the Tuesday B route.

Monitoring the Tonnage

Allied Waste Services, Randolph's recyclables hauling contractor, faxed the Randolph weight slips and toter reports to the project staff during B weeks. At the beginning of the pilot projects, Allied indicated that they were in the habit of carrying partial loads overnight for some routes and filling up the truck the next day with tonnage from another route before dumping. The contractor agreed to keep the loads from our test and control routes isolated from loads picked up from other routes during the pilots. They did this by dumping and weighing partial loads in the morning before beginning another route. The contractor did indicate that it might not be possible for them to keep loads from the test and control isolated at all times. Truck breakdowns or other logistical problems might prevent them from dumping partial loads in the morning before beginning the next day's route. The contractor's supervisor agreed to inform project staff when the loads were not kept isolated. However, dump times and percentage changes in tonnage from week to week led the staff to believe that he was not always able to notify the staff of these problems.

Reviewing the weight slips allowed the project staff to confirm that the weights were for the right day and community. For routes on which the driver picked up more than one truck load, the time of day that the second load was dumped gave some indication as to whether the driver started his next route with an empty truck. This information gave some indication as to whether tonnage from the test route or from the control route was being mixed with tonnage from any other route. However, it was not possible to determine definitively from the dump times alone whether the test route and control route tonnage had been kept separate from that of other routes.

The contractor's drivers fill out daily "cover sheets," on which the drivers note whether they ended and began each day's route with an empty truck or not. For several dates for which we were able to obtain them, these cover sheets enabled project staff to definitively determine whether loads from the test and control routes had been mixed with loads from other routes. It is likely that most, if not all, recyclables collection contractors have their drivers record this type of information. If you are conducting a pilot test, as we were in this project, it may be helpful to ask the contractor if they can provide you with the driver cover

sheets. Providing this information relieves the contractor’s supervisor of the responsibility of notifying you when loads from different routes are mixed.

The weights for the test and control routes were monitored for a number of collection days before the campaign was launched. This was the “pre-test” or “baseline” period. The weights for the test and control routes were also monitored while the campaigns were carried out. Finally, weights for the test and control routes were monitored during a follow up period beginning after each campaign ended. The beginning and end dates for the measurement periods for each campaign are shown in Table 10.

Table 10: Pilot Time Line

Measurement Period	North Randolph Campaign Dates (Week of)	East Randolph Campaign Dates (Week of)
Baseline	January 17 – April 25, 2005	January 17– March 28, 2005
Campaign	May 7 – 22, 2005	April 11 – July 18, 2005
Follow up	May 30 – August 15, 2005	July 25 – August 1, 2005

Four baseline measurements were collected for the East Randolph Campaign. Six baseline measurements were collected for the North Randolph Campaign. Although the goal had been to collect at least five baseline measurements for each pilot, that goal was not achieved for the East Randolph Campaign, due to its earlier start date and weather and truck related problems that made it difficult to obtain enough valid data.

Due to further weather and truck related problems, only one measurement was collected during the North Randolph campaign period. Only three measurements were collected during the East Randolph campaign period.

Weather and truck related problems continued during the follow up period. Further, Allied Waste Services did not record the number and fullness of totes picked up during some weeks. Four useable measurements were collected on the North Randolph Campaign route during the follow up period. One useable measurement was collected on the East Randolph Campaign route during the follow up period. Attempts were made to collect measurements through the middle of November, 2005, but no useable data was collected between mid-August and mid-November. For each campaign, the measurements collected during the campaign and follow up periods were combined for the purposes of comparison to the baseline period.

North Randolph Campaign Results

The changes that occurred from the baseline period to the campaign/follow up period on the North Randolph Campaign route are shown in Table 11.

Table 11: North Randolph Campaign Results

	Avg. Biweekly Tonnage		% Change in Avg. Tonnage
	6 Wk. Baseline Period	5 Wk. Campaign/Follow Up Period	
Test Route	5.27	5.54	5.1%
Control Route	6.19	6.41	3.6%

% Change Due to Strategy 1.6%

The average biweekly tonnage for both the test and the control routes went up from the baseline to the campaign/follow up period, but the test route tonnage went up slightly more. However, the difference between the test and control route, 1.6%, is so small, that it may have occurred simply by chance. It appears from these results that the door-to-door visits did not lead to any substantial change in recycling behavior. It is possible that door-to-door visits are not effective without an accompanying neighborhood goal, reward and feedback. It is possible that the poorer performance of Randolph volunteers in obtaining commitments from residents resulted in less of an impact on recycling tonnage than in Dedham.

However, it is also possible that the weights picked up on the test and control routes were not always accurate measurements. The driver cover sheets were the only way to confirm definitively that loads from the test and control routes were not mixed with loads from other routes. Some measurements were discarded when the driver cover sheets showed that a load from the test or control routes had not been kept separate. However, in the end, Allied Waste Services was not able to provide driver cover sheets for the entire pilot period. If some inaccurate measurements remained in the data set, the above results would not truly reflect changes in recycling behavior, if any, that occurred in North Randolph.

Finally, another possibility is that there were underlying differences between the populations on the test and control routes that weren't evident from the demographic and other criteria used to choose the routes. For example, all but one of the campaign/follow up measurements were from July and August. If residents on one of the routes took substantially more or longer vacations than residents on the other route, this may have affected the pilot results.

Lessons Learned/Recommendations: North Randolph Campaign

Door-to-Door Outreach

Each volunteer wore a t-shirt identifying them as a Randolph Recycling Volunteer. However, on some outreach days, these t-shirts were completely hidden under jackets and coats due to cold, rainy weather. In bad weather, it is recommended that volunteers be provided with badges, hats or some other identifier that can be visibly displayed.

In both Dedham and Randolph, when residents needed additional storage space for recyclables, outreach volunteers offered them a recycling label to put on a container of their own choosing or a town-issued bin delivered to their home. In Dedham, where the bins cost \$5, about three times as many labels as bins were requested. In Randolph, where bins are free, 169 bins were requested, 130 of those during the first full weekend of outreach. On subsequent outreach days, we asked Randolph volunteers to make sure that a bin was really needed by simply asking people if they had enough space in their bins, and if not, by offering a recycling label first and a bin only if necessary.

Conclusion

The North Randolph Campaign did cost less to implement than the full Oakdale Campaign. Recruiting partner organizations, including youth groups, increased the number of volunteer hours contributed to the North Randolph Campaign, compared to recruiting only adult volunteers one by one, as we did in Dedham. However, young people less than 13 years of age appear to be less effective at this type of outreach than teens and adults. Overall, extra steps may be necessary to ensure the quality of volunteers' interactions with residents when working with partner groups. It is likely to be possible to work with some of the same partner groups on annual campaigns of this type, which would dramatically reduce recruitment time. Word of mouth over a multi-year period may also result in new groups coming forward. It appears to be possible to raise a substantial portion of the payments made to partner organizations from the local business community, but additional research is needed to determine what package of benefits would be more appealing to potential sponsors.

While we were not able to show conclusively that the door-to-door campaign increased the amount recycled in North Randolph, we have found that door-to-door campaigns of this type are viewed very positively by residents and create a lot of good will. At Randolph town meetings, community leaders approached Board of Health officials, who oversee the town's recycling program, and commented on how well informed and professional the recycling volunteers were. A Randolph resident also stopped in at the Board of Health offices to praise the National Honor students who had come by his house to answer

questions about recycling. In Dedham, the Oakdale Recycling Campaign generated similarly positive reactions from elected officials, residents and the volunteers who conducted the door-to-door visits.

The East Randolph Recycling Campaign: A Neighborhood Goal, Feedback and a Reward

The primary goal of the East Randolph Recycling Campaign was to increase motivation to recycle. This strategy used a series of six door hangers to show people the progress being made towards a neighborhood recycling goal. The door hangers can be found in Appendix A. Research has shown that simply providing targets for a community to reach can be effective in increasing waste reduction.⁴ Further, feedback on the impact of their behaviors helps people maintain them.⁵ The feedback displayed on the door hangers conveyed the message that everyone's individual contribution makes a difference when you look at it in the context of what the neighborhood can accomplish as a whole.

The door hangers also publicized a reward to benefit the neighborhood that would be provided if the recycling goal were met. The reward was a park bench made of recycled plastic lumber for the Senior Center grounds. The grounds surrounding the Senior Center are a pleasant open space that is enjoyed by the East Randolph neighborhood at large. A reward that enhances the quality of life in the neighborhood may motivate those who don't relate to increased recycling as a goal in itself. Two of the six door hangers communicated to residents that recycling saves tax dollars. Information about tax dollars saved through recycling may serve as an ongoing quality-of-life incentive.

A second campaign goal was to overcome lack of knowledge about how and what to recycle. A less commonly known recyclable (such as junk mail or phone books) was featured on the back of each door hanger, to bring attention to the materials accepted in Randolph's curbside program.

Sandwich board signs and notices sent home with school students were also used to publicize the campaign.

Campaign Objectives

In order to achieve the goal of cost effectively increasing recycling by minimizing the strategy's cost and time requirements, three main objectives were laid out.

⁴ McKenzie-Mohr, D. & Smith, W. (1999). *Fostering Sustainable Behavior: An Introduction to Community-Based Social Marketing*. New Society Publishers: British Columbia, Canada, p95.

⁵ McKenzie-Mohr, D. & Smith, W. (1999). *Fostering Sustainable Behavior: An Introduction to Community-Based Social Marketing*. New Society Publishers: British Columbia, Canada, p100.

The following sections describe the campaign objectives, along with the results and lessons learned.

Objective 1: Decrease Costs

The goal/reward/door hanger strategy was projected to cost 35% less than the full Oakdale Campaign Strategy, assuming that we could recruit volunteers to do 25% of the door hanger distribution shifts, as we did in Dedham. We anticipated reducing the cost of this strategy even further by providing a smaller, less expensive reward. Decreasing the size of the reward also lessens the likelihood that it will displace internal motivations as a reason to recycle.

The monetary costs of carrying out the East Randolph Neighborhood Recycling Campaign on a recycling route of 947 households are shown in Table 12. The total cost of 2,725.46 worked out to \$2.88 per household. Thus, the per household cost for the East Randolph Campaign was 50% lower than the per household cost for the Oakdale Recycling Campaign, even lower than expected based on the initial budgeted cost of the East Randolph Campaign.

Table 12: East Randolph Campaign Budget

Budget Item	Cost
Neighborhood Reward [1]	\$587.00
Door Hanger Distribution [2]	\$1,237.50
Door Hanger Printing [3]	\$780.00
Sandwich Board Signs [4]	\$63.00
Notices Sent Home with School Students [5]	\$57.96
TOTAL	\$2,725.46

[1] American Recycled Products 6 ft Arlington Bench. \$459 + \$108 shipping + \$20 for a plaque indicating the Board of Health's sponsorship and the purpose of the bench as a reward for the neighborhood's recycling efforts.

[2] \$1,215 was budgeted to pay 6 people \$45 each to distribute door hangers 6 times in East Randolph. This figure was based on the assumption that we would find volunteers for about 25% of the distribution shifts, as we did in Dedham. Individuals opting to receive community service credit in lieu of payment completed close to 25% of the distribution shifts. Randolph Town staff completed the remainder of the unpaid shifts.

[3] 1,100 copies of a 4.25" x 11" double sided door hanger. See Appendix G for specifications.

[4] See Appendix G for sandwich board sign specifications.

[5] 456 double sided notes on 8 1/2" by 11" paper.

Objective 2: Increase Private Sector Funding

We believed that this strategy had high potential for private sector funding, because the six door hangers offer the project sponsor a great deal of visibility. Our aim was to secure private sector funding to cover **all** of the monetary costs of carrying out this strategy. If this proved possible, and if this strategy led to

long-term behavior change, this might well be the most cost effective option for municipalities.

In fact, we failed to secure any private sector funding for the East Randolph Campaign. Some possible explanations for this are provided on page 31 in the Lessons Learned section for the North and East Randolph campaigns.

Objective 3: Decrease Staff Time Needed for Door Hanger Distribution

In the Oakdale Campaign, project staff participated in each of the door hanger distributions because we were not able to recruit enough distributors to carry out this task. In Randolph, we explored a variety of means for recruiting more distributors, with the goal of accomplishing at least four of the six distributions with project staff in a supervisory role only.

In fact, we accomplished only one distribution in this fashion. A second distribution was completed with a very limited amount of distribution done by project staff. While this constituted an improvement over the Oakdale Campaign, it fell short of our goal for the East Randolph Campaign.

Our strategies for recruiting door hanger distributors included the following: When recruiting organizational partners for the North Randolph Campaign, we also notified the groups of the opportunity to receive payment for distributing door hangers in the East Randolph Campaign. The National Honor Society and the Trinity Episcopal Church Youth Group, partner organizations in the North Randolph Campaign, also distributed door hangers in the East Randolph Campaign. In some cases, payment went towards the organization's fundraising efforts. In other cases, payment was made to the individual distributor. The Town's Youth Commission also put us in touch with two Randolph teenagers sentenced to do community service, who distributed door hangers for community service credit in lieu of payment.

The successes that we had doing distribution with project staff in a supervisory role only, or nearly so, utilized Boston University (BU) students recruited through the BU Quickie Job Service at http://www.bu.edu/link/bin/uiscgi_student_employment.pl?ModuleName=se_job.pl. If we had known of this service earlier in the pilot, it is likely that we would have met our goal. The BU Quickie Job Service was a reliable and efficient source of recruits, in one case resulting in six recruits within hours of posting the job. Given a few day's lead time, recruiting enough distributors through the Service to do door hanger distribution for a project like this one is very feasible if the project is anywhere in the wider metro Boston area. We also recruited one Randolph resident to do distribution via www.craigslist.com. We found the work done by individuals recruited through these online services to be of good quality.

Evaluation

In order to evaluate the effectiveness of the East Randolph Recycling Campaign, the tonnage was monitored on a test route on which the campaign was carried out, and on a control route. The tonnage was monitored during a baseline period, a campaign period and a follow up period. The procedures followed are described in the “Evaluation” section for the North and East Randolph Campaign, found on page 19.

East Randolph Campaign Results

The changes that occurred from the baseline period to the campaign/follow up period on the East Randolph Campaign route are shown in Table 13.

Table 13. East Randolph Campaign Results

	Avg. Biweekly Tonnage		% Change in Avg. Tonnage
	4 Wk. Baseline Period	4 Wk. Campaign/Follow Up Period	
Test Route	5.88	5.25	-10.7%
Control Route	6.18	6.70	8.4%

% Change Due to Strategy	-19.1%
--------------------------	--------

The average biweekly tonnage for the test route went down from the baseline to the campaign/follow up period. The average biweekly tonnage for the control route went up from the baseline to the campaign/follow up period. The result was a substantial negative change on the test route relative to the control route. Did the door hangers lead to less recycling on the test route rather than more? This may have been the case if the campaign angered or confused residents on the test route. However, there is no good evidence to support this conclusion. Door hanger distribution staff regularly encountered residents outside of their homes and handed a door hanger to them rather than hanging it on a door. Occasionally, a resident declined the door hanger, but much more often, people were grateful to receive it, and interested in the progress being made towards the goal. The evidence that we have, then, indicates that on the whole people had a positive reaction to the campaign, not a negative one. We don't have evidence one way or the other regarding the possibility that residents were confused by the campaign.

As with the North Randolph campaign, it is possible that there were problems with the quality of the data. Not having driver cover sheets for the entire pilot period made it impossible to confirm that the weights in our data set were

accurate measurements of the amounts picked up on the test and control routes. Further, we were unable to obtain as many measurements as we wanted during the baseline, campaign and follow up periods. These small data sets may not give an accurate picture of changes in recycling behavior on the test and control routes. It is also possible that underlying differences between the populations on the test and control routes affected the pilot results.

Lessons Learned/Recommendations: East Randolph Campaign

Door Hangers

In the Dedham and Randolph projects, we found it necessary to attach door hangers to door knobs and handles with a rubber band. Otherwise, even the slightest breeze dislodged them. A Town of Randolph Selectman pointed out that using rubber bands to attach the door hangers meant that the standard-size die cut hole and slit necessary to slide a door hanger over a door knob was not needed. We reduced the hole size and eliminated the slit, leaving more space on the door hanger for text and graphics. See Appendix G for the door hanger specifications.

Door Hanger Distribution

There was evidence that the quality of one of the six door hanger distributions was compromised because we did not have adequate adult supervision for several teenagers who helped out. Our experience indicated that partnering the young people doing community service with a responsible adult is strongly recommended. In the absence of adequate adult supervision, it would have been helpful to communicate more clearly to the teenagers that payment or community service credit was contingent upon results of a spot check by project staff of the area they covered.

Conclusion

We were able to carry out this strategy for 50% less than the per household cost for the Oakdale Neighborhood Recycling Campaign, even less than expected based on the initial budgeted cost of the East Randolph Campaign. However, our belief that this strategy had high potential for private sector funding was not borne out. In future efforts, we recommend that some input be sought from objective members of the business community on how the benefit package might be made more appealing to potential sponsors.

Of the methods we explored for recruiting more door hanger distributors, the BU Quickie Job Service showed the most promise for increasing the number of distributors with a minimal time investment. Involving teenagers sentenced to do community service in the door hanger distribution can lower costs, but adequate adult supervision is important.

We were unable to show that distributing door hangers in East Randolph increased recycling there. The numerical results showing that recycling actually decreased on the test route are puzzling, because there was anecdotal evidence that residents reacted positively to the campaign.

Lessons Learned/Recommendations for the North and East Randolph Campaigns

Lessons learned and recommendations that apply to both the East Randolph and the North Randolph Campaigns are presented in this section.

Choosing Test and Control Routes

If you are conducting pilot tests, as we were in this project, it is important to choose test and control routes that are as similar as possible to each other. Demographic statistics may not reveal cultural and political differences between neighborhoods. In order to discern when underlying differences may exist, we recommend supplementing census information with anecdotal assessments of each area made by knowledgeable individuals in the community. As in Randolph, a politician who has done door-to-door canvassing in different parts of town may be able to be helpful. Data on voting patterns by precinct or ward may also be helpful.

Monitoring the Tonnage

Collecting sufficient, accurate data to evaluate the effectiveness of an outreach strategy is very challenging. It usually involves asking the hauler to change their standard operating procedure in order to keep loads from the pilot routes separate from loads on other routes. It may involve asking the driver to do extra record keeping, as with the number and fullness of totes picked up in Randolph. Finally, it requires that a supervisor or other staff person transmit weight slips and other records to project staff on a frequent basis. All of these tasks take extra time, and are understandably less important than making sure all recyclables are picked up on time.

In the end, these limitations prevented us from obtaining as many measurements as we would have liked in order to get a clear picture of changes in recycling behavior. Further, these limitations prevented us from obtaining and using the driver cover sheets to confirm the accuracy of all of the data.

Fundraising

In the 2004 Dedham pilot project, we approached four local banks with an invitation to sponsor the Oakdale Recycling Campaign, indicating that the opportunity was offered on a first come, first served basis. In the Oakdale Campaign, the promotional benefits for the sponsor included the following:

- Seven door hangers with the sponsor's name and contact information were distributed to 700 homes in the neighborhood.
- Every volunteer wore a t-shirt that with the sponsor's name on it.
- A permanent plastic lumber sign with the sponsor's name on it was installed on the Oakdale Elementary School grounds.
- 700 households in the neighborhood received a letter from the town that mentioned the sponsor's contribution to the project.
- The local paper carried an article and an advertisement publicizing the sponsor's role.

All four bank officials that we contacted in Dedham expressed interest, and indicated that they were pursuing approval for our request. In a flurry of communication towards the end of the process, Dedham Co-operative Bank narrowly beat a local rival to become the campaign sponsor. In all, Dedham Co-op donated \$1,370 towards the cost of the campaign. The cost to Dedham Co-op was about \$2 per household reached. The interest shown by potential sponsors convinced us that this type of campaign is a valuable sponsorship opportunity for a private sector partner.

In Randolph, the above advertising benefits of sponsorship were split between the East and the North Randolph Campaigns. Some new benefits were added in each campaign. The East Randolph Recycling Campaign promoted the sponsor's name and logo on:

- ◆ Six door hangers distributed to 950 homes in the neighborhood
- ◆ A notice sent home with neighborhood elementary school students
- ◆ Fourteen sandwich board signs placed around the neighborhood
- ◆ Newspaper publicity
- ◆ A permanent plaque on a park bench

Our belief was that the door hangers provided the bulk of the visibility for the sponsor in Dedham's Oakdale Campaign. For this reason, and because of the strong interest from potential funders in Dedham, we thought it likely that a sponsor would be willing to provide a higher level of funding to the East Randolph Campaign than we had solicited in Dedham. We approached a community-oriented local bank in Randolph with an invitation to sponsor the East Randolph Recycling campaign in the amount of \$2,750. The cost to the sponsor was about \$3 per household reached. The bank declined. We then approached the remaining seven banks in Town with an invitation to sponsor the East Randolph Recycling Campaign. They declined as well. It is possible that the cost per household was too high. Another point of reference was obtained in the nearby Town of Avon. In an unrelated program there, a bank readily donated \$2,000 towards the distribution of six door hangers to 2,000 households, at a cost to the bank of \$1 per household.

Subsequently, we also offered one or two banks the option of sharing sponsorship of the East Randolph Recycling Campaign with the Town's Board of

Health. For a lesser donation, the bank would have shared the available promotional space on each door hanger with the Board of Health. There were no takers for this offer, either. It is possible that the multiple options on offer may have been confusing or overwhelming for potential sponsors. This was made more likely due to the fact that we simultaneously offered the banks the opportunity to sponsor the North Randolph Campaign.

The North Randolph Campaign promoted the sponsor's name and logo on:

1. A letter announcing the upcoming door-to-door visits mailed to 864 households in the neighborhood;
2. A door hanger distributed to each household the week before the door-to-door visits began;
3. A notice sent home with all elementary school students in the neighborhood;
4. Fourteen sandwich board signs displaying large-scale versions of the door hanger placed around the neighborhood the week before the door-to-door visits began; and
5. A newspaper advertisement placed once the door-to-door visits were complete.

Further, we expected that our volunteers would speak with residents at about 70% of the households in the neighborhood, for a total of 600 contacts. These residents would have additional exposure to the sponsor's name and logo on:

1. Volunteer t-shirts;
2. A pledge card left with the resident; and
3. Business promotional items (brochures, pens, coupons, etc.) that our volunteers provided to each resident at the sponsor's request.

Based on the original volunteer commitments we had received from our partner organizations in the North Randolph Campaign, we anticipated needing about \$4,000 to reimburse them for outreach hours worked. We invited each bank to sponsor the North Randolph Campaign in an amount up to \$4,000. None of the banks we approached took this offer, and it was clear that the \$4,000 amount led to sticker shock for some.

At this point, we began approaching other businesses in town, as described under Objective 4 for the North Randolph Campaign: Exploring Private Sector Funding. We also began offering potential sponsors the opportunity to sponsor just one partner organization, or even co-sponsor a group with another business. This approach provided a range of sponsorship amounts, from \$250 to \$2,000, which made it possible for businesses to choose a level that fit their financial capabilities. Even so, some businesses couldn't donate more than \$100. Nevertheless, this approach met with considerable success, raising 74% of the payments made to partner groups.

The process of seeking many small contributions was time consuming, however, and only 13% of the businesses we approached did donate. In order to improve

the success rate, we recommend that some input be sought from objective members of the business community on how the benefit package might be made more appealing to potential donors.

It would also be helpful to determine the relative importance of various benefits to potential sponsors. For example, if having their name printed on the volunteer t-shirt is not that valuable, costs for this relatively expensive item can be decreased. Separate set-up charges for a t-shirt with each sponsor's name on it can be eliminated. Further, although we expected that some individuals would not follow through on their commitment to volunteer, we didn't know which organizations would make a good showing and which ones would not. Since the t-shirts for each organization had a different sponsor's name on them, we needed to purchase enough t-shirts to accommodate 100% of the volunteers from each organization, in case they all showed up. If the t-shirts can have a generic design, it would be possible to order fewer t-shirts, keeping in mind that some people from some organizations will not show up. Using generic t-shirts would also decrease the chances of the printer making mistakes on the order, which happened in our case.

We recruited our partner organizations before soliciting campaign sponsors, because we expected that potential sponsors would want to know which local groups would benefit from their donations. The result of recruiting partner organizations and sponsors sequentially is that we solicited some businesses quite close to the deadline for getting t-shirts and other items printed with sponsors' names. It is possible that we would have gotten some additional donations if we had been able to give potential sponsors more time for decision making.