

The Oakdale Neighborhood Recycling Campaign

A Community Working
Together to Promote
Participation in Curbside
Recycling

Prepared for the Massachusetts Department
of Environmental Protection

Prepared by Aceti Associates and the Town of
Dedham Recycling Staff

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The Oakdale Recycling Campaign

In 2004, the Town of Dedham, Massachusetts set out to increase participation in its curbside recycling program. The Town piloted an innovative outreach campaign in its Oakdale neighborhood.

Oakdale residents, who took part in the campaign from late March through the end of June, increased their recycling even more than the Town had hoped. The campaign challenged residents to recycle 3,700 bins full of recyclables by the end of June. Residents smashed that goal, recycling 4,575 bins full, or 17% more than another, similar part of town that was used as a comparison. Seven and a half months after the campaign ended, Oakdale residents were still recycling 10.5% more than they had been before the campaign began.

“It costs the Town less to recycle trash than to throw it away,” said Town Administrator William G. Keegan, Jr. “Recycling helps us stretch tax dollars, and so the success of this campaign is good news for taxpayers. And,” he continued, “we can be proud of the campaign for another reason. It illustrates, along with so many other projects here in Dedham, what we can accomplish by working together. Volunteers, businesses, institutions and government all contributed to the recycling effort. And Oakdale residents took the ball and ran with it.”

Not only does recycling make fiscal sense in the present, but future generations will have a richer, cleaner planet as a result of recycling. Town-wide, a 10.5% increase in recycling would save the following **each** year:

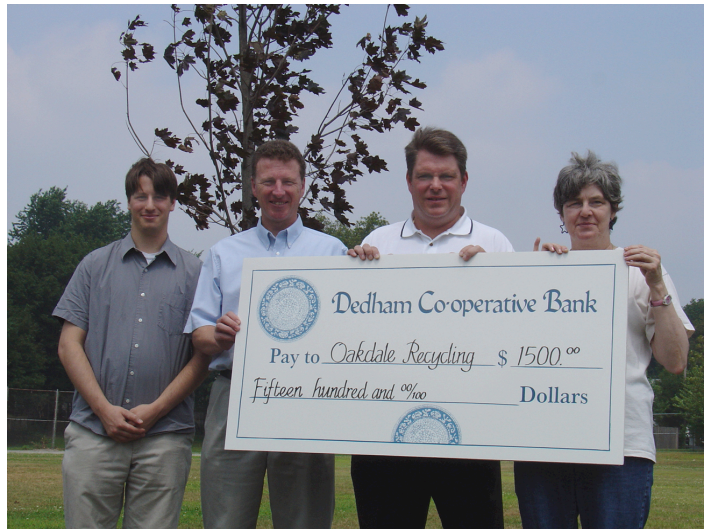
- ❖ 2,040 trees
- ❖ enough electricity to power 28 homes
- ❖ enough water for 23 people

It would also reduce carbon dioxide pollution in an amount equivalent to taking 61 cars off the road each year.

The project was underwritten by a grant from the state’s Department of Environmental Protection. “Our goal in funding creative initiatives like the Oakdale Recycling Campaign is to identify successful ideas that communities across the state can adopt,” explained DEP Branch Chief Brooke Nash. “So, Dedham is not only benefiting from higher recycling rates, but also showing the way for other cities and towns.”

Locally, members of the Dedham business community served as campaign sponsors. Dedham Co-operative Bank donated three trees to be planted at the Oakdale Elementary School if the neighborhood met the 3,700 bin goal. Later,

with residents on track to exceed that goal, the Bank raised the bar, donating a fourth tree for recycling 4,500 bins by the end of June. “Oakdale residents have done a spectacular job of keeping valuable recyclable materials from being thrown away,” said Mark Whalen, president of Dedham Co-operative Bank. “We chose to support this project because it contributes to the vitality of our community through beautification, fiscal responsibility and environmental protection.” The bank also paid for a sign, to be installed near the trees, which recognizes the neighborhood’s recycling efforts. The plastic lumber sign is made from recycled plastic bottles. In addition, the Bank paid for t-shirts worn by volunteers who went door to door in the Oakdale neighborhood, answering questions about recycling. The t-shirts were 100% recycled, made with reclaimed cotton and polyester thread made from soda bottles.



From left to right: Recycling Coordinator Dave Hirschler, Dedham Co-operative Bank President Mark Whalen, Town Administrator William G. Keegan, Jr. and Recycling Volunteer Susan Haggerty, in front of one of the trees donated by the Bank in recognition of the Oakdale neighborhood's recycling efforts.

The Dedham Rotary Club supported the campaign with a donation that paid the postage costs of mailing a letter to each household in the campaign area, informing them of the upcoming door-to-door visits by recycling volunteers. Shaws Supermarkets provided bottled water for the volunteers. Waste Management, the Town’s trash and recyclables collection contractor, was also an important partner, helping out in a variety of ways that allowed the Town to carefully evaluate the effectiveness of the campaign.

Even other communities pitched in to help out. The towns of Arlington and Concord loaned Dedham several portable sandwich board signs that were used to publicize the campaign in the neighborhood when it first began.

So, what did the campaign involve? In late March, each household on the Tuesday B recycling route, which encompasses a section of Oakdale neighborhood close to the Oakdale Elementary School, received a door hanger informing them of the campaign and challenging them to meet the 3,700 bin goal by the end of June. Another door hanger was delivered about every two weeks thereafter, providing a recycling tip and displaying a thermometer that showed progress towards the goal. On Saturdays in May, recycling volunteers went door-to-door in the campaign area. The volunteers answered residents’

questions about recycling, reviewed a list of the items accepted in Dedham's recycling program, and asked residents to pledge to recycle all they could.

"Residents were more than willing to do their part," said David Hirschler, Dedham's Recycling Coordinator. "Almost 90% of the people we talked to made a recycling pledge. About half of these individuals pledged to add items to their recycling that they had not previously known were accepted in the Town's program, like junk mail, cereal and shoe box-type cardboard and aluminum trays and foil. Because of the financial benefits to the town," Mr. Hirschler continued, "we also asked people if they would continue to recycle these items even after the campaign was over. Everyone could see the value in that."

Volunteers also provided residents with information about where Dedham's recyclables are sent throughout the US and Canada and what types of products they are manufactured into. And, volunteers showed residents handmade recycled paper that fourth grade students at the Oakdale School had crafted from shredded scrap paper blended with water.

Sixteen Dedham residents, many of them from Oakdale, and one Tufts University graduate student volunteered to go door-to-door to talk with Oakdale



Outreach volunteers Jack MacDonald and Don Seager are briefed by campaign coordinator Jan Aceti

householders about recycling. Volunteer Dianne Bauer reported that "it was a nice community feeling to go out and do something like this. It's like going to First Night. People smile at you and say 'Happy New Year' even though they don't know you. It was a very positive drive to get everyone involved in recycling."

The Church of the Good Shepherd in Oakdale Square opened their parish hall so that a volunteer training session could be held in a location convenient to the neighborhood. Likewise, the Dedham Public Library trustees and staff arranged for the neighborhood branch library to be open during the door-to-door outreach, so that campaign organizers and volunteers could use it as a home base.

Dedham residents were involved in the Oakdale Recycling Campaign long before the first doorbell was pressed, however. A group of nine residents served as an advisory committee during the planning of the campaign. Recycling Coordinator

Dave Hirschler noted, “The advisory committee helped us plan a campaign that would be meaningful and helpful to Dedham residents. For example, they told us that most people don’t know that they can use a container other than a recycling bin to hold their recyclables. So, as we went door-to-door, we made sure to let people know that they can use any sturdy, waterproof container that holds about the same amount as a Town-issued bin. We also have labels that people can place on their container so it’s clear that it’s for recycling.”

“In addition to providing valuable input at committee meetings,” Mr. Hirschler continued, “committee members helped out with other parts of the campaign, put us in touch with potential volunteers and helped raise funds. The campaign really benefited from their efforts.”

Dedham residents, both as volunteers and as paid staff, also helped distribute the door hangers throughout the neighborhood.



Above: Arthur McCoy and Slav Kozhokaryu. Left: Katelyn Costello and Katie Goodwin

The campaign was headed up by Jan Aceti of Aceti Associates, an expert in the field of social marketing, and David Hirschler.

The four new trees earned by Oakdale residents through their recycling efforts have been planted behind the Oakdale School. Mabel Herweg, horticulturalist and Dedham resident, volunteered her time to select the trees and consult with the Town on their planting and maintenance. “These maple trees will live for 100 to 200 years,” she said. “Thus, we are planting beautiful trees for four to eight future generations.”



What are the next steps for the recycling campaign? “It was important to test the effectiveness of the campaign in one part of town first,” stressed Assistant Town Administrator Nancy Baker. “We’d like to expand it town-wide if possible. Last year,” she continued, “the Town saved \$124,000 through recycling. If the entire town were to increase their recycling as much as the Oakdale neighborhood did this spring, we could save an additional \$22,000 next year.”

In the meantime, the Oakdale neighborhood and the Town of Dedham as a whole should be proud of coming together and working hard to beautify the town while helping the environment and the economy by recycling.

Community-Based Social Marketing: The Innovative Approach Behind Dedham's Success

In designing the Oakdale Recycling Campaign, planners used an approach called community-based social marketing (CBSM). CBSM focuses on removing barriers to an activity while simultaneously enhancing the activity's benefits. Knowledge from the social sciences about behavior change is used to help achieve these goals. The campaign targeted these factors:

Barrier: Lack of Knowledge

Research shows that those who are less knowledgeable about how and what to recycle are less likely to participate in recycling, or tend to recycle less material.

Barrier: Lack of Motivation

Research indicates that laziness is one reason why people don't recycle.

Barrier: Inconvenience

Research shows that those with a stronger perception of recycling as inconvenient, recycle less or not at all.

Benefit: Making a Difference

Research shows that the more people see recycling as making a difference, the more likely they are to participate, or to participate fully.

Research References:

Aceti, J. (2002, December). Recycling: Why People Participate; Why They Don't. Report prepared for the Massachusetts Department of Environmental Protection. Boston, MA.
Research International (2000, June). Massachusetts DEP Recycling Participation Study. Report prepared for the Massachusetts Department of Environmental Protection. Boston, MA

The following sections describe how the Oakdale Recycling Campaign overcame the barriers and enhanced the benefits of recycling

Objective 1: Increase Knowledge; Decrease Inconvenience

- ❖ A less commonly known recyclable (such as junk mail or phone books) was featured on the back of each door hanger (see Appendix A).
- ❖ Recycling volunteers went door-to-door to:
 - Answer questions about how and what to recycle;
 - Read through a list of materials accepted in the program, in case the resident was unaware of any of them;
 - Make sure people have as many recycling containers as they need to store their recyclable material between pick up days;
 - People who didn't were offered a "Recyclables" sticker to place on a container of their own choosing or delivery of a town-issued recycling bin later that day. The standard \$5 fee per town-issued bin was charged.
 - Check to make sure people aren't making recycling harder than it is.
 - In focus groups conducted in 2001 with Boston-area residents, some partial and non-recyclers indicated that recycling took more effort than they were willing to give. Most partial or non-recyclers were unaware that recyclables preparation requirements have become less stringent over the years. For example, these individuals believed that it is still necessary to flatten cans, to remove bottle neck rings and to remove labels from cans and bottles. Erroneous beliefs about preparation requirements loomed large in people's perception of recycling as inconvenient.

Research on persuasion indicates that the major influence upon our attitudes and behavior is our contact with other people. Therefore, the Oakdale Recycling Campaign employed door-to-door volunteers to convey information about recycling, rather than brochures or flyers. However, people aren't always keen on having a stranger knock on their door who wants to talk with them. Going door-to-door to talk with people can feel quite uncomfortable as well. So, we took the following steps to make it as comfortable as possible for the people doing the visiting and the people being visited.

- ❖ We distributed four door hangers before the door-to-door visits took place in the month of May. So, when the door-to-door visits did take place, people saw them in the context of a larger campaign to promote recycling, rather than something happening out of the blue.

- ❖ The door hanger that was distributed just before the visits announced that volunteers would be coming around to answer questions about recycling.
- ❖ As a further measure to provide the volunteers with as much credibility as possible, we sent each household in the neighborhood a letter from the town announcing the upcoming visits.
- ❖ Finally, each volunteer wore a “Dedham Recycling Volunteer” t-shirt.

We also enhanced the credibility of the campaign by publicizing it within the neighborhood via several other means besides the door hangers. There is evidence that when people are evaluating the credibility of a message, they consistently look for more information to validate what they’ve already heard. Therefore, we placed sandwich board signs around the neighborhood announcing the campaign, and sent a note home with each student attending the neighborhood elementary school.

Objective 2: Increase Motivation

We provided the trees as a neighborhood reward because we felt that an incentive that enhances the quality of life in the neighborhood might motivate those who don’t relate as strongly to increased recycling as a goal in itself. As an ongoing quality-of-life incentive, volunteers mentioned the tax dollars that are saved when trash is recycled rather than thrown away.

We asked people to sign a pledge to begin recycling items they hadn’t known were recyclable or to continue recycling everything they could. Because our society values people whose deeds match their words, people are more likely to follow through on an action if they’ve committed to do it. Written commitments tend to be more powerful than verbal commitments, which is why we asked people to sign a pledge. The pledge card can be found in Appendix E. Public commitments are more powerful still, so we asked people for permission to publish their name in the Dedham Times along with others who had pledged. Volunteers also asked residents if they would continue recycling new items even after the campaign was over.

Objective 3: Help People Understand That Recycling Makes A Difference

- ❖ The door hangers provided feedback on the neighborhood’s progress towards the goal;
- ❖ The trees were offered as a concrete benefit for the neighborhood if the recycling goal was met;
- ❖ The door-to-door volunteers did the following:
 - Informed people that recycling trash is less expensive than throwing it away, so Dedham saves tax dollars as a result of recycling;

- Showed people photos taken at the recycling facility;
- Showed people a map displaying where Dedham's recyclables go for remanufacturing;
- Described what Dedham's recyclables get made into;
- Showed people a piece of recycled paper made by Oakdale Elementary School students; and
- Pointed out the t-shirt he/she was wearing as another tangible example of a recycled product.



The Advisory Committee

The resident advisory committee played a crucial role in this campaign in the following ways:

- ❖ They provided information on recycling barriers particular to Dedham;
- ❖ Their input helped shape:
 - The content and format of the door hangers and
 - The content and format of the door-to-door visits;
- ❖ They helped us identify:
 - Volunteer and paid staff for door hanger distribution;
 - A meaningful reward for the neighborhood;
 - Potential private sector sponsors;
 - Ways to publicize the campaign in the neighborhood;
 - Ways to make the door-to-door visits as comfortable as possible for everyone (e.g. do the visits on Saturday; don't bother people after work, or on Sunday, which is family day);
 - Ways to improve campaign logistics (e.g. if a resident needs a recycling bin, but won't be home when the bins are delivered, don't bother trying to arrange a repeat visit to deliver a bin when they're home. Instead, let people leave a check for a bin taped to their door).

When we recruited advisory committee members, we made it clear that we were requesting a temporary commitment consisting of just two 2-hour meetings, a month apart. We recruited members by calling individuals involved in various community groups in Dedham. Dedham's official website has links to the websites of most local community groups. A community group website often listed a board of directors, with contact information. Even if the individuals we called were unable to serve on the committee, they were usually able to refer us to other potential members. We recruited nine members in this way.

Although we made it clear that committee members were obligated only to attend the two meetings to which they had committed, several members helped out with the campaign in other ways. They:

- ❖ Served as a "game show host" for our  Symbol  of Fortune Game Show at the volunteer training;

- ❖ Helped distribute door hangers;
- ❖ Served as door-to-door outreach volunteers.

Two committee members who belonged to the Dedham Rotary Club championed our request to Rotary for a \$180 postage grant for the letter to residents announcing the door-to-door visits.

Budget

The monetary costs of carrying out the campaign on a recycling route of seven hundred households are shown in Table 1. The total cost of 5,639.06 worked out to \$8.06 per household.

Table 1: Budget

Budget Item	Cost
Trees [1]	\$ 1,275.00
Door Hanger Distribution [2]	\$ 922.00
Door Hanger Printing [3]	\$ 822.50
Plastic Lumber Sign [4]	\$ 580.00
T-shirts [5]	\$ 398.93
Newspaper ad [6]	\$ 375.00
Outreach Volunteer Stipends [7]	\$ 365.00
Sandwich Board Sign Printing [8]	\$ 259.00
Postage for Letter to Residents [9]	\$ 180.00
Supplies for Outreach Volunteers [10]	\$ 144.63
Pledge Cards [11]	\$ 129.00
Refreshments [12]	\$ 70.37
Recycling Container Sticker Distribution [13]	\$ 45.00
Hand Activated Counter [14]	\$ 41.00
Paper Making Equipment [15]	\$ 31.63
TOTAL	\$ 5,639.06

- [1] Four Trees at \$300 ea. & \$75 for delivery from Peabody to Dedham.
- [2] Four people were needed for 2 1/4 to 3 hrs for each of the 7 distributions to 700 households. \$45 was budgeted per person per distribution, for a total cost of \$1,260. However 7 1/2 out of a total of 28 shifts were completed by volunteers, meaning that the door hanger distribution cost for the pilot was less than anticipated.
- [3] 900 copies of each of 7 double sided 4.25"x11" door hangers at \$117.50 per door hanger (there were around 700 households on the route, but ordering 900 copies of each door hanger gave us ample excess at minimal cost).
- [4] See Appendix G for sign specifications.
- [5] 40 t-shirts @ \$9.05 each plus a \$25 set up charge and \$11.93 for shipping from Simsbury, CT to Dedham. We only ended up with 17 volunteers, so this cost might have been lower if we had waited to order until we had a better volunteer count.
- [6] 4' x 15 1/4" advertisement
- [7] Volunteers were paid \$20 for each 2 hour shift going door-to-door. See Appendix F for more details on total hours worked. Some volunteers did not claim their stipend, or donated it back to the campaign. This budget item does not include their stipends. Most volunteers asked that the town donate their stipend to a community organization of their choice.
- [8] See Appendix G for sign specifications. Some municipalities are able to print out sandwich board-size signs on their engineering plotters and can eliminate the cost of paying for outside printing.
- [9] Letter sent to 700 households announcing door-to-door visits. Dedham provided paper and envelopes.
- [10] Clipboards made from recycled plastic, plastic sleeves for photos, metal rings for making "photo albums."
- [11] See Appendix G for pledge card specifications
- [12] We provided food and beverages at advisory committee meetings, the volunteer training and at the base camp after the door-to-door visits. We found that the food was not consumed. This cost could be reduced by providing beverages only.
- [13] Volunteers offered residents stickers to place upon a container of their own choosing to identify it as a recycling container. Unfortunately, the stickers were not printed in time for the volunteers to distribute during the door-to-door visits. Because the cost of mailing the bulky stickers would have been high, they were dropped off at people's doors by paid personnel. This cost could be eliminated if the volunteers could hand out stickers during their door-to-door visits.
- [14] See "Choosing Test and Control Routes" under *Lessons Learned/Recommendations*.
- [15] Equipment was purchased and used by Oakdale Elementary School 4th graders to make recycled paper.

Private Sector Funding

Identifying a local sponsor to fund the neighborhood reward was a goal of the campaign from the beginning. The advisory committee helped the project staff to identify potential donors. We approached four local banks with the sponsorship offer, indicating that the opportunity was offered on a first come, first served basis. Our initial request was for \$800 to go towards the trees and plastic lumber sign. In return, the bank's name and logo would be placed on all seven door hangers, and on notices sent home with Oakdale Elementary School students. Further, the door-to-door volunteers, the plastic lumber sign and the newspaper article published at the campaign's end would all reiterate the Bank's sponsorship role.

All four bank officials that we contacted 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. When informed that we were also seeking a sponsor to pay for the t-shirts to be worn by the door-to-door volunteers, Dedham Co-op upped their donation by \$400 to cover the cost of the t-shirts. In return, the t-shirts indicated the Bank's sponsorship. When it became clear that the neighborhood would exceed the 3,700 bin goal, Dedham Co-op donated an additional \$170 towards a fourth tree, should the neighborhood exceed a higher goal of 4,500 bins. In all, Dedham Co-op donated \$1,370 towards the cost of the campaign. As mentioned above, the Dedham Rotary Club donated \$180. The interest shown by potential sponsors convinced us that this type of campaign is a valuable sponsorship opportunity for a private sector partner.

When the costs covered by private sector donations are subtracted, the net cost of the campaign for 700 households was \$4,090, or \$5.80 per household.

Evaluation and Results

The Oakdale Recycling Campaign was designed as a small scale test of the effectiveness of this outreach strategy. The campaign was implemented on one recycling route in Dedham, which we refer to as the "test" route.

Choosing Test and Control Routes

It was important to monitor changes in the tonnage collected not only on the test route where the recycling campaign was 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 strategy 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 campaign, 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 Dedham, the Monday B and Tuesday B routes best met the criteria needed to ensure a smooth implementation and valid evaluation of this pilot.

Table 2: Test and Control Route Characteristics

Criteria	Test Route Tuesday B	Control Route Monday B
Collected in Same Week	Yes	Yes
Ease of Door Hanging	Good	Not Applicable
Excess Truck Capacity	Yes	Not Applicable
Pre-Pilot Set Out Rate	63%	55%
Median Household Income	\$64,783.44	\$66,692.92
Avg. Household Size	2.76	2.75
% Owner Occupied	93.21.10%	92.36%
% with College Degree	36.89%	30.45%

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. It was also important that door hanger distribution and door-to-door visits on the test route 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 driver overtime. Such a situation might lead to operational or contractual difficulties that could jeopardize the success or even the completion of the pilot. Finally, 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. There is some difference between the set out rates on the two routes. However, the Tuesday B and Monday B routes were the routes closest in set out rate that also met the other necessary criteria.

Monitoring the Tonnage

The Waste Management dispatcher faxed the Dedham weight slips to the project staff each day during B weeks. 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 indicated whether the driver started his next route with an empty truck. Knowing this information assured us that tonnage from the test route and from the control route was not being mixed with tonnage from any other route.

The weights for the test and control routes were monitored for five 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 for seven collection days while the campaign was carried out. Finally, weights for the test and control routes were monitored during a follow up period beginning after the campaign ended and continuing for 7 1/2 months.

Table 3: Pilot Time Line

Measurement Period	Dates (Week of)
Baseline	October 14, 2003 – March 15, 2004
Campaign	March 29, 2004 - July 5, 2004
Follow up	July 19, 2004 – February 14, 2005

The changes that occurred from the baseline period to the campaign period are shown in Table 4.

Table 4: Campaign Results

The average biweekly tonnage for both the test and the control routes went up

	Avg. Biweekly Tonnage		% Change in Avg. Tonnage
	5 Wk. Baseline Period	7 Wk. Campaign Period	
Test Route	6.57	7.69	17.0%
Control Route	8.02	8.04	0.2%

% Change Due to Strategy 16.8%
from the baseline to the campaign period, but the test route tonnage went up much more. The difference between the test and control route, 16.8%, is most likely attributable to the campaign.

Follow up measurements were made in order to determine if the change in recycling behavior observed during the campaign persisted after the campaign ended. When the follow up period is compared to the baseline period in Table 5, the results show that changes in recycling behavior persisted at least 7 _ months after the campaign ended, but not at the level observed during the campaign.

Table 5: Follow-Up Results

	Avg. Biweekly Tonnage		% Change in Avg. Tonnage
	Baseline Period	Follow-Up Period	
Test Route	6.57	7.32	11.4%
Control Route	8.02	8.09	0.9%

% Change Due to Strategy 10.5%

Nevertheless, during the 7_ months after the campaign ended, the average biweekly tonnage was still 10.5% higher on the test route than on the control route. Interestingly, this 10.5% increase in tonnage on the test route was quite consistent throughout the follow up period. That is, after the campaign ended, it appears that the 16.8% increase seen during the campaign period dropped quite quickly to 10.5%, rather than declining slowly. It is possible that some fraction of the residents on the test route made an effort to recycle more until the trees were won, but then reverted to their previous habits. In fact, there is evidence from

social science research that short term incentives, such as the trees we offered as the neighborhood reward for reaching the recycling goal, are not effective in encouraging lasting behavior change.¹ During our door-to-door visits, we did offer residents an ongoing incentive to recycle by mentioning the savings in taxpayer dollars that result from recycling trash rather than throwing it away. However, the door-to-door visits did not reach everyone.

Lessons Learned / Recommendations

Choosing Test and Control Routes

If you are conducting a pilot test, as we were in this project, it is important to choose test and control routes that are as similar as possible in terms of demographics and pre-pilot set out rate. Ask your hauler to have the driver count set outs on several potential test and control routes. It takes no additional time and it becomes second nature for the driver after a few weeks. We found that the counts on several routes were the reverse of what the driver had estimated when we asked him to rank participation on each route as low, medium or high.

We purchased a hand-activated counter for \$41 and Waste Management installed it in the truck. It would have been interesting to monitor the change in set out rate on the test and control routes throughout the pilot, but the counter broke before too long. Buy a better quality model for making measurements over more than a month or two.

Monitoring the Tonnage

If you are conducting a pilot project, the following factors should be considered. It took five months, from October 14, 2003 to March 15, 2004, to obtain five baseline tonnage measurements for the test and control routes. This was due in part to the fact that Dedham has every other week collection. However, tonnage figures from a number of collection days in the fall and winter of 2003/2004 could not be used as baseline data. The test and control routes were collected on Tuesday and Monday respectively. In some cases, we were concerned that holiday travel patterns would have differing effects on the amount of recycling set out on the test and control routes. In other cases, information from the driver indicated that severe snowstorms had decreased the number of set outs far below normal on the test or control route. It was also necessary to discard the tonnage figures from the next biweekly collection day following the one on which there were holiday or weather disruptions. For example, assume that a resident does not put their recycling bin out because there are two feet of snow on the ground when they get up in the morning. That resident may have a larger than

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

usual amount of recyclables on their next collection day, which is two weeks later.

Campaign Timing

In addition to the timing of the baseline data collection, the timing of the campaign is also important. We feel that the best times for a campaign of this type are September through November or late March through June. Winter would be too cold for the volunteers and the door hanger distributors. The summer vacation season would also be a difficult time for a campaign because there would be fewer people available to volunteer, fewer residents at home to visit and fewer people active in reaching the goal.

Outreach Volunteer Recruitment

Our original plan was to partner with one or more community groups to do the door-to-door visits as a fundraiser. In return for time donated by their members, the Town would donate \$15-20 per 2-hour shift worked to their organization. Despite offers to virtually every community group in Dedham, and several non-profit organizations outside of town, this approach failed.

We were able to recruit an adequate number of volunteers individually, but this was quite time consuming. We still think the idea of recruiting a group to do the visits as a fundraiser has potential, and suggest that the following recommendations be explored:

- ❖ Increase the donation to \$50 per 2-hour shift worked. Ask your corporate sponsor to cover some or all of this cost. By doing so, they increase their visibility among the organization's members as well as among residents receiving the door hangers and visits. In addition, this scheme allows the sponsor to leverage their money to accomplish several worthy goals.
- ❖ Consider recruiting youth groups. We chose not to approach youth groups because of concerns that many teenagers would not be mature enough to negotiate a persuasive conversation with a stranger. However, with some additional training and adequate adult supervision, it may be feasible to employ teenagers as door-to-door volunteers. Combining a training session with some actual door-to-door practice and a subsequent debriefing may be a good format.

There was attrition among the volunteers that we recruited. When looked at as a group, the volunteers worked only 66% of the shifts that they initially committed to. We think that recruiting members of a group to do the visits would have the added benefit of lowering attrition. Volunteers would be more likely to keep their volunteer commitment in order to help the group meet its fundraising goal. In order to enhance this sense of accountability, we suggest encouraging each partner group to publicize a volunteer roster, showing who is going to volunteer, when, and for how many hours.

The following recommendations may make it easier for people to fit a volunteer shift into their schedules:

- ❖ Make the outreach schedule more flexible. 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. A better idea would have been to staff a base camp from 10am – 4pm on each Saturday, and allow volunteers to come in, pick up outreach materials and do a 2-hour shift at any point during that time period.
- ❖ Consider 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.

Door-to-Door Outreach

Dedham residents were very receptive to the door-to-door visits. While volunteers encountered a few people who were unreceptive or upset at being bothered, these were few and far between.

We encouraged each volunteer to conduct the conversation in his/her own words and using his/her own style, so that both the volunteer and the resident would feel more comfortable. To this end, we provided each volunteer with a list of topics to cover, but not a script. We gave the volunteers the prerogative to adjust the length of the conversation to match each resident's interest level. We categorized the items on the topic list as "essential" or "helpful but not essential" in order to help the volunteers make this adjustment. See Appendix E for more details.

Door-to-Door Logistics

We were able to go back to some homes where no one was home the first time. We first tried to prepare address lists for volunteers by deleting the addresses where we had spoken with someone on a previous outreach day. We realized, however, that it was better to leave all addresses on the list, but to strike out the ones that did not need to be visited again. This made everything easier for the project staff to keep track of. The volunteers also found this strike-out method easier, because some houses were either difficult to find or not numbered. When every house was on the address list, it was easier for the volunteers to figure out which house they were at, even if it didn't have a visible house number on it.

In order to help volunteers be more efficient, arrange the address lists by proximity, so that streets that are physically adjacent to each other are adjacent on the list. Do not arrange the address lists alphabetically. Providing the volunteers with a map as well as the list of addresses also helped them find their way around efficiently, particularly because some of the streets were not labeled with street signs at every intersection.

The address lists that the volunteers were given had spaces to note whether the resident needed a bin or a yard waste sticker, for example (see Appendix E for a sample address list). We suggest that the address list also include check boxes for each item on the topic list. In this way, all of the items that are to be part of the conversation are on one sheet, instead of being divided between the address list and the topic list. Using this format, the volunteer would not only mark down that the resident needed a bin, but would also check off that they had mentioned to the resident that the town saves money as a result of recycling. This would make it easier for the volunteer to check off the addresses as they visited each house, to flow through their interactions with residents more quickly and to ensure that the important topics were covered.

Bin Deliveries

Upon the return of each volunteer to the home base, go over their address lists with them and immediately compile a list of addresses, on a pre-printed form, to which bins need to be delivered. This is much more efficient than reviewing all the address lists after the volunteers have left.

Have volunteers instruct residents to leave a check for the bin in an envelope taped to their front door, *even if they are going to be home later in the day when the bin deliveries take place*. Knocking on the door and waiting for a check to be written takes a lot of time.

Dedham does not normally deliver bins, and word of mouth generated inquiries about bin delivery service from outside the Oakdale neighborhood. Some residents also called because they were under the mistaken impression that Oakdale residents were being provided with bins for free. We briefed town staff ahead of time, so they could let residents outside Oakdale know that the bins were not being provided for free, and that they were being delivered as part of a special campaign. If a community were to decide not to charge for bins distributed during a campaign like this, it may be worthwhile to have a bin fee amnesty for the entire town during the campaign.

Publicizing Recycling Pledges

A reporter at the local newspaper, the Dedham Times, initially made an informal commitment on the part of the paper to include the names of all those who had made a recycling pledge in an article to be published in the paper. While an article on the campaign was published, the newspaper was ultimately not able to provide free space for the names. We purchased an advertisement in which we thanked our sponsors and our volunteers and listed the names of the 216 households and individuals who had pledged to recycle and given permission for their names to be published. We recommend that sizeable in-kind donations be confirmed in writing.

Planting Trees

If you are providing trees as a reward to a neighborhood for meeting a recycling goal, make sure, before publicizing the location, that the presence of underground utilities does not prevent trees from being planted there. Before publicizing the location it is also important to ensure that all municipal departments with jurisdiction over the location or a role in planting the trees are fully on board.

Conclusion

The Oakdale Neighborhood Recycling Campaign was a small-scale pilot project. How feasible would it be to carry out a campaign of this type community-wide? The staff time and volunteer power needed for this outreach strategy would make it very challenging to carry out such a campaign across an entire community at one time. A more realistic option would be to stretch implementation over several years. In a community like Dedham, with 8,700 households, we would suggest that the town be divided into roughly five sections, and that a campaign be carried out in one section in the spring and in one section in the fall of each year. This keeps the process at a small scale, but gives a timetable for completion. At this pace, Dedham could complete the entire town in 2.5 years.

The stability of the 10.5% tonnage increase on the test route throughout the 7-month follow up period is encouraging. It suggests that this increased rate of recycling could be expected to endure for some time into the future in Dedham neighborhoods where this outreach strategy is carried out. The transferability of this result to another community would likely depend on the rate of resident turnover in that community.

Would it be financially worthwhile for a community like Dedham to use this strategy? If Dedham were to implement this strategy on its remaining 9 recycling routes, with a resulting 10.5% increase in recycling tonnage town wide, the town's recycling tonnage would increase by 168 tons per year. The campaign cost for each new ton diverted from the waste stream would be \$417. If private sector funding similar to the level obtained in this pilot could be procured, the cost of diverting each new ton from the waste stream drops to \$303/ton. This cost is still substantially more than the \$78 trash tip fee savings that Dedham would realize for each new ton recycled. Further, the campaign required significant amounts of staff and consultant time.

In an era when recycling rates in many communities are stagnant or declining, the pilot project results indicate that it is possible to increase recycling participation with a campaign of this type. The next step is to find ways to decrease the cost and time involved so that this outreach strategy can be more easily implemented by municipalities.

We recommend that the following modifications to the strategy be tested.

- ❖ **Cut costs** through one of the following options:
 - Reduce the number of door hangers from seven to three. The first would announce the campaign, the second would show progress towards the goal and announce the door-to-door visits. The third would show the results of the campaign.
 - Eliminate all of the door hangers except for one that would announce the door-to-door visits. Sandwich board signs, letters to residents and notes sent home with school children would also announce the upcoming visits. The neighborhood goal and reward would be eliminated in this scenario.
 - Eliminate the door-to-door visits and use only the seven door hangers. The door hangers would display progress towards a neighborhood goal and tips to increase recycling. This version probably has the highest potential for private sector funding, because seven door hangers offer the project sponsor the most visibility.
- ❖ **Decrease the time expended** by recruiting groups rather than individuals to do the door-to-door visits. This entails raising additional private sector funding in order to pay higher stipends.
- ❖ **Decrease the cost per ton** by increasing the number of additional tons diverted. In the Oakdale Recycling Campaign, we spoke with someone at 47% of the homes on the Tuesday B route. It seems reasonable that the greater the number of residents we talk with, the greater the increase in tons recycled. It should be possible to increase the percentage of residents we talk to by going back to addresses where no one was home on the first visit. In a somewhat similar project carried out in the City of Cambridge, it was possible to reach 70% of households after three attempts.² In order to accomplish this goal, it will be necessary to recruit a greater number of volunteers than we did for the Oakdale Recycling Campaign.
- ❖ **Increase private sector funding** by requesting additional funds from a campaign sponsor or by recruiting multiple sponsors. 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 every home 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.
 - Every household 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.

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

This is an incredible amount of exposure for the campaign sponsor, and there is a good chance that a sponsor would be willing to provide a higher level of funding than we requested in the pilot project.