

Appendix IV

PUBLIC EDUCATION ABOUT RECYCLING

Since New York City's Recycling Law was passed in 1989, discussion about recycling policy in New York City has focused a great deal on public education. The City's most recent fiscal crisis (2002 and on) has intensified this discussion, as cuts to the public education budget were made along with temporary suspension of certain materials from recycling collection. But even during periods of full funding and an active, multifaceted public education campaign, some have argued that deficiencies in education and outreach have prevented New York City's diversion rate from reaching its true potential, thereby interfering with the fiscal and environmental success of recycling in NYC.

For example, in 2001, when diversion stood at around 19 percent, the Natural Resources Defense Council asserted that:

If New York City were to strengthen its recycling public education efforts, and more New Yorkers were to become familiar with precisely what should be recycled, recycling rates would be expected to increase.¹

A year later, the Citywide Recycling Advisory Board echoed this position, stating that "the City's 20% recycling rate is partly due to the fact that more than half the recyclables are thrown in the trash—the result of inadequate education."²

Such observations are characteristic of a view that has dominated debate about recycling in New York City over the years. This view holds that there were problems with recycling public education in the past, and that spending more in this area could and would increase the diversion rate beyond the 20 percent attained in 2001. Implied in this perspective is the notion that there are untapped areas of public education program development that, if addressed, would further boost diversion. In other words, not just more but "better" recycling public education is needed.

Now that the recycling program is fully restored, and fiscal constraints facing all City agencies are beginning to ease, it is crucial to have an objective idea of what can realistically be expected from major changes to public education spending and/or approach. In other words, are there different ways to educate residents that the City should undertake now that the full recycling program has been reinstated? Should the City spend more on recycling public education than it did annually between 1997 and 2002? And has purported "inadequate education" (as cited above) really contributed to problems with recycling in the past?

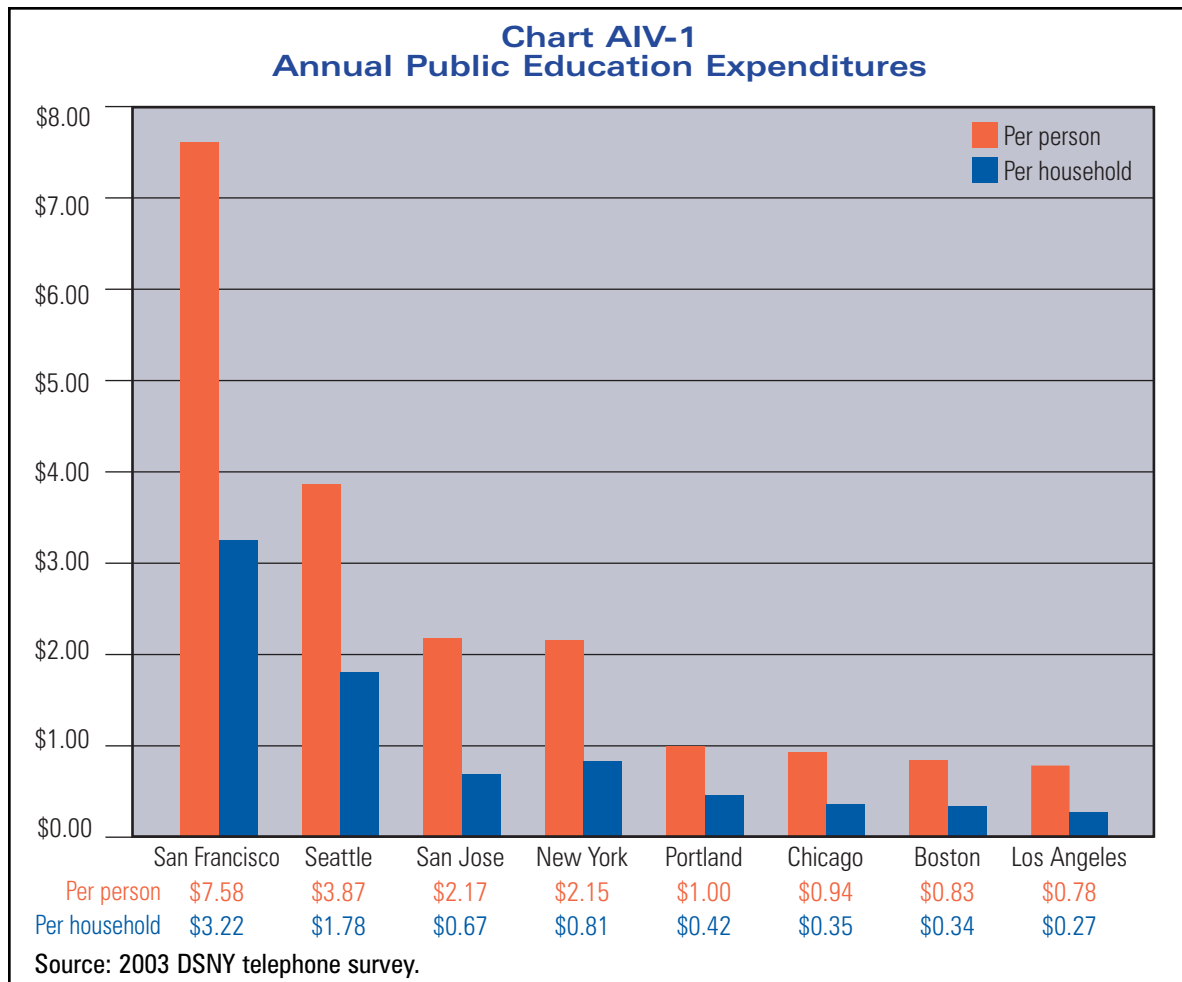
Fortunately, these are questions that can be empirically investigated. New York City's spending levels on public education, and its choice of campaign elements, can be compared to those for other U.S. jurisdictions to identify any missing approaches that have been successful elsewhere. In addition, a large body of survey data exists to document citizen knowledge about recycling in New York City throughout the 1990s, which speaks to the effectiveness of the City's public education campaign.

Spending

Since planning for the “Expanded Recycling Program”³ began in 1994–1995, the Department has averaged roughly \$6 million per year in public education spending, which translates to a little over \$2.00 per household per year. Conversations with recycling coordinators in several other large, major cities show that this spending level is slightly above average (Chart AIV-1).

San Francisco has a substantially higher expenditure level than other cities because outreach and education are independently funded through a fee assessed for private collection, rather than through a general fund—thus freeing this budget item from competing with other city funding priorities.⁴

In one of the most complete studies on recycling public education spending to date, Skumatz and Green found that spending among 140 Iowa municipalities averaged \$1.00 per household per year.⁵ This study found that “communities with low diversion tended to have lower outreach expenditures than those with high diversion.”⁶ The study also found that “adding \$1 in expenditures [per household per year] adds 3% to recycling rates,” in communities with lower than average expenditures, and roughly 1% in communities with higher than average expenditures (i.e., those already spending more than \$1.40 per household per year).⁷ Using this estimate, it would cost New York City an additional \$3.2 million annually to raise the diversion rate by one point.



It would thus appear that New York City’s spending level *per se* has not been inadequate, when compared to other major U.S. cities and major studies of funding trends. However, the level of funding alone does not determine program success. The choice of elements in a public education campaign is also crucial. How does NYC stack up against other places in this area?

Campaign Elements

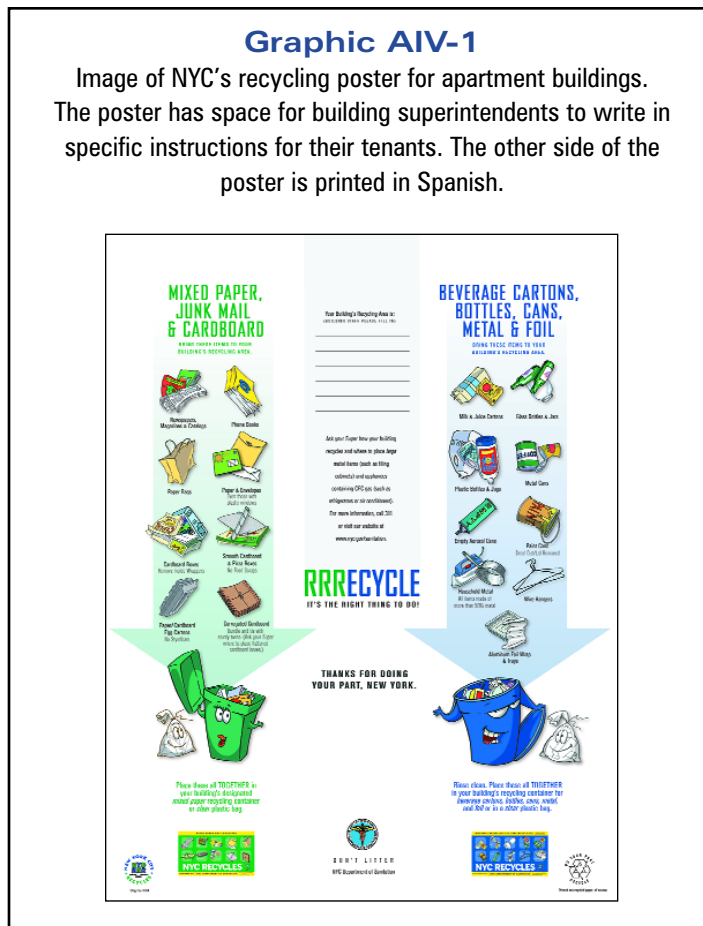
Cutting the Waste Stream in Half (profiled in Appendix II), by the Institute for Local Self-Reliance (ILSR), asserts that certain elements of public education campaigns are key to achieving record-setting diversion rates:

All our community record-setters promote recycling through education, publicity, and outreach... More and more communities are taking advantage of the Internet to spread the word about recycling... Effective educational tools include fact sheets, newsletters, recycling guides, posters, utility or tax bill inserts, calendars, radio and newspaper ads, hotline, web sites, PSA’s, appearances on local cable shows and booths at community events... Producing educational materials in more than one language can help increase understanding and participation.⁸

Some communities promote recycling and education through in-person education... [in Visalia, CA] staff were always willing to meet with individuals to resolve any issues. This personal contact with residents was an important element in creating Visalia’s successful program.⁹

At first glance, the ILSR’s list of “keys to success” seems compelling. After all, who could argue that education in these forms *isn’t* helpful? There is no doubt that successful programs depend on public education and outreach to communicate recycling guidelines and rules. At the same time, simply observing that certain elements of public education are present among programs with high diversion rates does not address the question of whether there is a relationship between diversion and these elements.

In fact, most recycling programs—“record-setting” or not—tend to use the same strategies. For instance, in New York City, the DSNY Bureau of Waste Prevention, Reuse and Recycling (BWPRR) promotes recycling and waste prevention through publicity, education, outreach, and the internet. It uses fact sheets, recycling guides, posters (Graphic AIV-1), radio and newspaper ads, a hotline, public service announcements, utility/tax-bill inserts, as



well as recycling pages in each borough's yellow pages. For many years, BWPRR has placed promotional materials, such as posters and placards, on subways, buses, phone kiosks, storefronts, and on the sides of buildings (Photo AIV-1).

BWPRR routinely produces materials in three languages—English, Spanish, and Chinese, which are distributed through the DSNY [website](#), the 311 Citizen's Service Center, or by staff at community events (Graphic AIV-2). Of the elements that ILSR lists, only newsletters and calendars have not been part of the City's public education program.

Many of the public education elements in use by NYC are seen in the public education programs mounted by other major cities, such as Chicago, San Francisco, Seattle, and Los Angeles. Those cities in which waste management is privatized use the billing process as a communication vehicle. Seattle is distinguished by its semi-annual newsletter mailed with residents' collection service bills. San Francisco also incorporates education into billing, which is part of its privately run collection service. But overall, the range of strategies and initiatives undertaken by these and all other major cities is remarkably similar.

A less common program involves “building captains”—volunteers who organize recycling arrangements and provide some outreach to fellow tenants. Seattle and San Francisco both offer rebates on collection bills if a resident volunteers for this duty; Boston runs a voluntary program along these lines as well. Another novel approach is San Francisco's intensive, neighborhood campaigns, which are conducted every six months in each of six zones in the city to reinforce recycling participation. The campaigns are based around a phone banking operation that contacts a minimum of 15,000 households in the targeted neighborhood, and supplements this contact with door-to-door distribution of information, as well as local transit ads, street signs, newspaper ads, presentations, and press releases/articles in community papers.¹⁰

So which forms of public education work, and which don't? The research of Skumatz and Green, which focused exclusively on lowa communities between 700 and 200,000 households, found that newspaper advertisements and articles, bill stuffers, and brochures led to increased diversion in urban and suburban areas, while TV

Photo AIV-1

Pictures from some of BWPRR's outdoor advertising campaigns: Manhattan *NYC Recycles* billboard in 1992, recycling checklist phone kiosk ad in 1999, and the *New Yorkers Recycle More, Waste Less* “Go Poster” in 2004.



advertisements, point-of-purchase approaches, and door-to-door strategies did not.¹¹ This study hypothesized that diversion-rate outcomes would “vary based on the quality and type of outreach.” It concluded, however, that “data were insufficient to analyze these and other questions.”¹²

Another commonly cited element to a successful recycling program is work with schoolchildren. The ILSR Report observes, “education programs directed at school-age children produce positive environmental attitudes, which are retained over time.”¹³ This is by no means a novel idea. The notion that “reaching the children early” is key to recycling and overall environmental progress has, for decades, enjoyed great resonance among a diverse constituency. And in most cities, including New York, recycling program staff focus on schools.

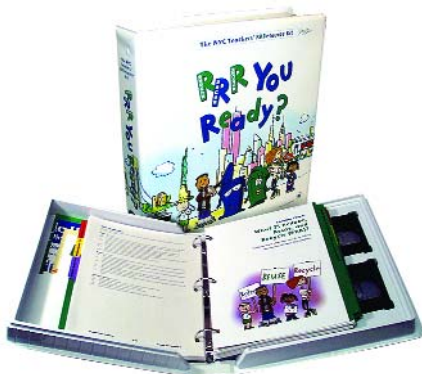
Since the recycling program began, BWPRR has developed educational materials geared specifically for NYC’s approximately 1,200 schools. These materials include how-to-recycle information; curriculum materials for teachers; and for students, coloring and comic books, as well as fun give-aways such as t-shirts, backpacks, and beanie toys (Graphic AIV-3). There is also the annual Golden Apple

Graphic AIV-2
BWPRR regularly produces recycling flyers in English, Spanish, and Chinese, such as the recycling checklist flyers shown here.



Graphic AIV-3

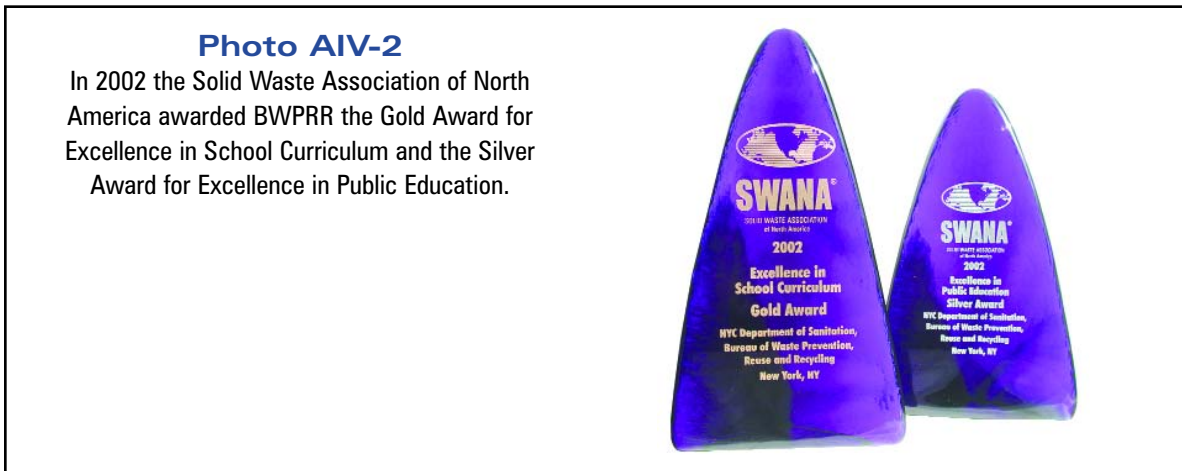
Left: To help NYC teachers incorporate recycling and waste prevention information into the school curriculum, BWPRR developed the *NYC Teachers’ RRRResource Kit: RRR You Ready?*—an over 300-page multimedia resource package that contains lesson plans, videos, and various reference materials. Developed in collaboration with the NYC Department of Education, the RRR Kit meets the teaching and achievement standards recently instituted into the NYC school system. Right: Building upon the themes presented in the RRR Kit, BWPRR developed two comic books that contain stories about the *TrashMasters!*—NYC kids who learn, and then teach their peers about reducing, reusing, and recycling.



Awards program where DSNY gives cash prizes to schools for their waste-prevention, recycling, and neighborhood clean-up efforts (Graphic AIV-4).

In recognition of BWPRR's school recycling materials, the Solid Waste Association of North America (SWANA) awarded BWPRR the 2002 Gold Award for Excellence in School Curriculum. During the same year, BWPRR also received the Silver Award for Excellence in Public Education (Photo AIV-2).

Even though NYC's recycling education program uses similar techniques to those employed in other places, and its spending levels have historically been on par with other cities, what has sustained the notion that in NYC, public education for recycling underperforms? A third consideration could be that the *quality* of public education in New York City differs from other places. In other words, New York City may be spending the same as other cities, and doing the same things, but its efforts are not getting through to residents. As the next section will explain, extensive market research conducted on DSNY's behalf suggests that this is not the case.



Survey of Citizen Knowledge

Survey research over five years shows that both self-assessed and tested knowledge regarding recycling was solid, and in many cases, slowly and steadily increased along with the diversion rate (Chart AIV-2 and Table AIV-1). More information on the measured impact of public education can be found in BWPRR's *Recycling: What Do New Yorkers Think?* (published in the Fall of 1999 and available on the Department's website).

Surveys administered to thousands of New Yorkers revealed that while

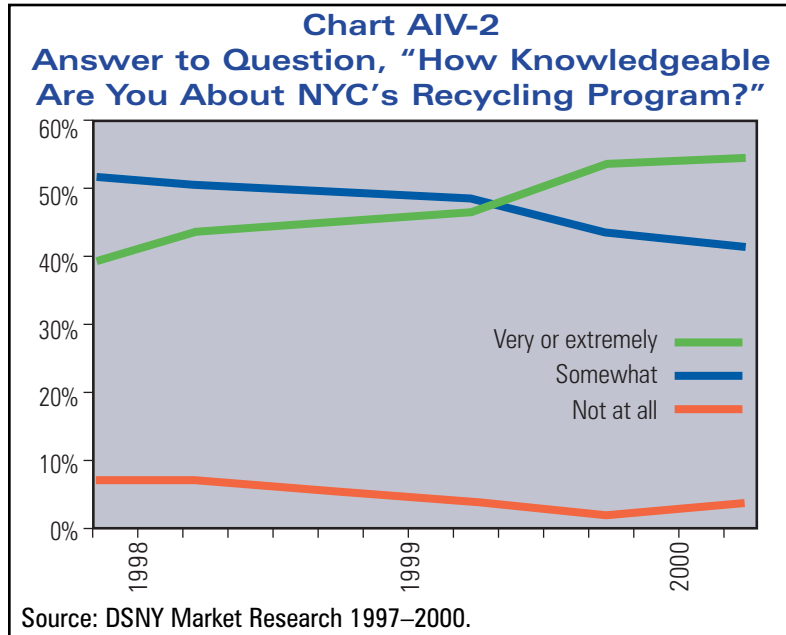


Table AIV-1
Respondents' Identification of Items Currently Accepted in the Recycling Program

	Sep '97	Jan '98	Jan '99	Jul '99	Jan '00
Recyclable items					
soda cans	95%	96%	97%	96%	98%
plastic milk/water jugs	91%	93%	93%	96%	98%
glass bottles	89%	93%	90%	92%	90%
aluminum foil	82%	78%	81%	77%	79%
shampoo/lotion bottles	75%	79%	84%	86%	85%
paper bags	82%	86%	85%	82%	84%
cereal boxes	79%	81%	85%	86%	86%
paperback books	79%	81%	86%	78%	86%
mixed paper	76%	84%	74%	78%	78%
discarded mail	71%	72%	71%	82%	76%
wire hangers	49%	47%	54%	59%	61%
old appliances	38%	48%	50%	58%	43%
Nonrecyclable items					
plastic bags	67%	67%	63%	64%	64%
yogurt containers	62%	68%	68%	71%	71%
hardcover books	59%	69%	71%	71%	75%
bottle caps/jar lids	52%	56%	58%	66%	62%
ceramics/mirrors/glassware	49%	55%	57%	54%	56%
styrofoam cups/plates	43%	48%	45%	47%	55%
light bulbs	41%	37%	35%	38%	36%
batteries	31%	38%	29%	34%	33%

Source: DSNY Market Research 1997–2000.

some areas of education needed improvement (concerning incorrect identification of certain non-designated plastics and glass as recyclable), overall, New Yorkers were well informed about recycling, viewed the recycling program favorably, and felt good about recycling's community and environmental benefits. It should be noted that DSNY's five-year survey of nearly 5,000 residents is the only study of its kind to measure public education impact at the municipal level. Most cities assess public education success anecdotally, or indirectly by attributing diversion success to public education efforts.

It should be noted that since the suspension of plastics and glass from the recycling program in 2002, confusion about the program has increased. (There is anecdotal, though not survey, evidence to support this.) Now that the full program has been reinstated, reeducating New Yorkers is a priority. The box below summarizes the various publicity efforts BWPRR has undertaken to inform New Yorkers about the full restoration of the City's recycling program.

2004 Advertising Campaign to Inform NYC Residents about the Return of Glass and Weekly Recycling Collection

Direct mail: BWPRR sent a direct mail piece to NYC residents, building superintendents, building management companies, and City agencies and institutions that contained information on the latest recycling requirements. Over 3.4 million pieces were mailed in April 2004.

Newspaper ads: From March to April 2004, two full-page, color ads ran in the City's major daily papers, as well as the City's three Spanish language dailies. Two issues of the Sunday *New York Times* contained a full-page, color fold-out of recycling regulations, and full-page ads appeared in community papers in each borough.

Telemarketing campaign: In conjunction with a telemarketing company, BWPRR sent a 30-second, recorded voice message to NYC residents. The message contained information about the materials that should be recycled and directed people to dial 311 for more information. More than 1.5 million messages were delivered during the second half of April 2004. A second campaign about enforcement will occur in June 2004.

Radio ads: From April 12 through June 21, more than 3,600 radio spots were scheduled to run in over 24 stations. The radio spots included versions of the telemarketing message sent to City residents.

TV ads: From April 19 through May 24, a total of 748 recycling ads appeared on cable and network stations. The ads featured the two animated TV spots developed in Spring 2001.

Municipal pay stubs: For the month of May, pay stubs for all municipal employees had the following message: *Glass and Weekly Recycling are Back.*

Email: In March 2004, BWPRR sent an html email announcement to district managers, borough presidents, and NYC council representatives informing them of the changes to the recycling program. The email included information on the upcoming publicity campaign and how to order bulk quantities of recycling decals and flyers for their offices. An official announcement was also sent through the City's official website, NYC.gov, to the more than 30,000 users who have signed up to receive newsletters through NYC.gov.

Truck posters: All DSNY collection vehicles displayed truck posters advertising the return of glass recycling.

Water-bill inserts: BWPRR made an arrangement with the NYC Department of Environmental Protection to insert notices about recycling and waste prevention with the over 800,000 water bills that they send to NYC customers.

Grocery store bag stuffers: BWPRR worked with the Food Industry Alliance to place notices about recycling and waste prevention into grocery bags. Participating grocery stores included D'Agostino, Food City Markets, Gristedes, Met Food Stores, Pathmark, Pioneer Food Stores, Stop & Shop, and The Food Emporium.

Clear bag campaign: To inform residents about the use of clear recycling bags, BWPRR produced shelf and window displays that will be placed in grocery, drug, and hardware stores.

Go Poster campaign: Recycling and waste-prevention posters appeared in all NYC "Go Poster" locations from April through June 2004.

New materials: To help support the recycling message, BWPRR printed recycling bumperstickers, which can be ordered through 311 and the Department's website. BWPRR also printed new t-shirts and hats to match the design of the bumperstickers, which will be distributed during special events.

What Can NYC Learn from Other Jurisdictions and Its Own Citizens?

Given that three independent measures of New York's past public education efforts (spending, diversion rate, and surveyed knowledge) show it to have been more than adequate through 2002, it is important to think carefully about how changes to recycling public education would translate to specific outcomes. Had there been no increase in diversion between 1997 and 2002, or if levels of knowledge about recycling had been very low, the argument might be made that a wholesale revision of public education is in order. Evidence is abundant, however, that this has not been the case. Nonetheless, the approach that dominates past and current debate on the issue consists of general calls to "improve recycling in New York City" by "improving public education." We believe the approach needs to evolve beyond this level of advocacy.

This is not to say that the City's public education program should never change—clearly, innovation and restructuring are crucial to keeping public education current and attention-grabbing. The City's approach to public education has evolved over the years, and will continue to evolve. As it does, the applicability of introducing ideas like block captains, phone-banking, newsletters, or other methods in use in other jurisdictions should be considered. But there is a difference between this approach to innovation and one that simply says, "in other cities they have program element X, and they have a higher diversion rate, so we should implement program element X here."

Overall, there is simply no reason to conclude that higher diversion will result from major changes to the recycling public education approach the City has used in the past. As both Appendix II and the main body of this report have shown, New York's diversion rate has been comparable to the paper, metal, glass, and plastic diversion rates of other cities. The problems New York City has faced in regard to recycling have been economic and infrastructural. Clearly public education is very important, and continuing creativity in program development will be needed. But what should be reassessed in future debate is the notion that there are large, untapped gains in diversion to be achieved by somehow changing the way public education and outreach are carried out in New York City.

Post Script—Enforcement

Unlike recycling public education, recycling enforcement in New York City is quite different than in other municipalities. Here the mandatory recycling law specifies tickets and fines for noncompliance. In many other cities, including Seattle, San Francisco, and Chicago, recycling participation is voluntary. Contamination of recycling set outs with trash is handled by leaving materials at curbside with a note, or, with larger apartment buildings, speaking with building managers. If contamination persists, the resident or building is simply dropped from collection service.

Why does NYC take a different approach? Its demographics require it. With 8 million residents and a density far exceeding any other U.S. city, leaving materials at curbside is not an option. Moreover, with over 70 percent of the City's nearly 3 million housing units in buildings of five or more apartments, building owners and superintendents take on a great deal of responsibility for recycling compliance. Given the difficulty of identifying noncomplying tenants, the City's recycling laws hold apartment building owners/managers responsible for correctly setting up a recycling area and placing materials at curbside, but do not generally enforce rules governing what is in the bin or bag. Such violations are more frequently issued to residents of single- or two-

Processing and Marketing Recyclables in New York City

family homes, where compliance at that level can be tied to the individual waste generator. Under this approach, the Department currently issues an average of about 10,000 notices of violation for residential recycling per month. There are currently around one hundred Enforcement Officers who work full-time on this endeavor.