



Business for Social Responsibility

Benchmark Report

Retail Recycling Project

August 15, 2002

Executive Summary

While Americans have grown increasingly accustomed to recycling in their homes and offices, they may not find it as easy to do so at the local shopping center. Some leading retailers have performed waste audits that found more than half of the garbage they throw away could be recycled. In some cases, environmentally conscious store employees are taking used cardboard, bottles, and other materials home for recycling because the facilities they work in don't offer recycling programs.

To address this issue, a group of leading retailers (accounting for well over 10,000 store locations in the U.S.) are working together with Business for Social Responsibility and independent consultant William Ferretti, former Executive Director of the National Recycling Coalition, on a project to improve recycling in retail operations, particularly in shopping malls. The project was underwritten with funds provided by the Aveda Corporation and Starbucks Coffee.

The information presented here is based on a benchmarking survey and interviews with eight major retail companies representing more than 10,000 store locations in the U.S., and on interviews with property managers, waste haulers, and recycling experts. The report documents current practices by retailers and leading examples of shopping center recycling, including key factors that contribute to their leadership status. It also identifies conditions that can impede recycling at retail facilities. Attention is also given to the economic benefits that accrue to retail centers that implement recycling programs.

The leadership examples documented here suggest that there are opportunities for more retail facilities to implement recycling programs. Doing so will depend on a number of factors including: willing and committed retailers and facility owners/managers; favorable economics of waste disposal that allow facility managers to reduce their operating costs of through recycling; enterprising recycling service providers who can assist facility owners in realizing those cost savings; and local government programs or policies that encourage commercial recycling. The report closes with recommendations for retailers, mall owner/managers and waste management/recycling service providers on how to optimize those key factors.

Introduction and Approach

This report highlights the findings of our research, and describes the current state of recycling in malls, examples of leadership practices, a discussion of barriers to implementing retail recycling, and recommendations for ways retailers and mall managers can improve recycling in malls.

To research the current state of recycling in malls, the project team interviewed representatives from eight major retail chains accounting for more than 10,000 stores in the U.S.; property management firms that own and operate more than 500 shopping centers in the 48 continental states; facility managers who have implemented leadership recycling programs; recyclers and waste haulers; municipal officials and representatives from waste management consulting companies that service retailers and shopping centers.

Overall, our research points to opportunities for retailers, property managers, and recycling service providers to work together to enhance retail recycling in ways that are good for both the environment and their business' bottom lines.

Current Practice

Almost all the retailers interviewed expressed interest in improving the practice of recycling in their stores, but there is wide variation in how retailers address recycling in their stores and in the amount of recycling that is taking place.

Among the key findings on current practices:

- » **A number of leading retail chains have corporate policies and programs to promote recycling at the store level.** Half the retailers interviewed have expressed a strong corporate commitment to recycling, sometimes even from the CEO level. Retailers have tasked headquarters staff in their Real Estate, Store Operations, or Environment Departments (or a mix of these), with implementing their store recycling policies, or supporting district managers and store managers in implementing the policies. (On the other hand, about half the retailers interviewed did not have specific corporate policies guiding store recycling and relied on whatever programs their property owners and property managers provide.)
- » **Retailers perceive that recycling is more advanced in store locations where they control waste management services than in locations where property managers provide these services.** The retailers with corporate recycling policies estimated that in 65 to 85 percent of the store locations where they control waste management services, at least one commodity is being recycled. They generally estimated that smaller percentages of their stores are recycling in cases where property owners/managers control waste management services.
- » **Retailers are receiving some recycling services from their property owners and property management companies.** Half the retailers interviewed indicated that

recycling services are generally included in their store leases with malls, although they noted this varies from mall to mall. Several retailers work to negotiate recycling provisions into their leases, such as requiring property owners to provide recycling bins and collection services.

- » **A growing number of retailers and property owners are using national waste management consulting firms to centralize their waste management and recycling services.** More than half the retailers and property owners interviewed contract with national waste management consulting firms (sometimes called aggregators), who provide waste management and recycling services. The services provided by aggregators can include waste audits, soliciting and negotiating bids for local waste and recycling haulers, as well as centralized billing and accounting. Some retailers have included specific provisions in their contracts requiring their aggregators to support or increase store recycling programs.
- » **Materials collected for recycling vary, with collection of old corrugated cardboard most widespread.** Retailers with corporate recycling policies generally require or encourage recycling of old corrugated cardboard (OCC), paper, plastic, bottles and cans. They report that collection of OCC for recycling is most widespread among both company-controlled and mall-based locations, followed by mixed paper and plastics, then glass bottles and aluminum cans.¹ One food-based retailer also has contracted for organics collection programs in some locations, particularly in Canada.
- » **There is an interest and willingness on the part of property owners to collaborate with interested retailers on expanding mall-based recycling.** Representatives from property management companies interviewed for this report were unanimous in their willingness to sit down with interested retailers to discuss recycling opportunities and even to explore the execution of pilot projects to evaluate the performance and economic effectiveness of mall-based recycling.

Leadership Examples

Our research identified a number of examples of leadership recycling programs and practices among retailers and property managers. One retailer with a well-developed recycling program reported that it is recycling nearly half of the waste generated in its store locations nationally. Similarly, leading recycling programs implemented by property managers at malls are diverting, in some cases, more than half of their tenants' solid waste for recycling. Appendix A of this report presents case studies profiling six mall-based recycling programs that provide noteworthy examples of good recycling performance.

Among the key findings on leadership practices among retailers and property managers:

¹ Waste management and recycling experts generally estimate that OCC constitutes 30 – 40 percent of a mall's waste stream. This, along with the fact that OCC is the most consistent revenue generator among the recyclable materials found in a mall's waste stream, make it an obvious target for recycling collection.

- » **Several of the retailers' procedures for opening new stores include explicit steps for arranging for recycling services.** These procedures require store managers, real estate staff, or the retailer's aggregator to assess the availability of recycling for the location and make appropriate arrangements.
- » **More than half the retailers interviewed have conducted waste audits of a sample of their stores.** Retailers generally reported that these audits generated valuable information about their current waste streams and recycling opportunities.
- » **Several of the retailers interviewed include recycling performance in operational performance audits of their stores that are reported back to senior management.** For instance, one retailer issues a quarterly scorecard on its stores' environmental performance for a range of metrics, including recycling. Another retailer is amending its traditional "shrinkage audit" that evaluates factors affecting store profitability (such as shoplifting prevention) to include a set of environmental variables like energy efficiency and waste reduction. In at least one case, managers are being held accountable for their stores' performance on recycling with their financial bonuses based, in part, on their waste reduction and recycling results.
- » **Leadership malls are recycling a broad range of materials.** While malls most commonly collect OCC for recycling, the leading programs profiled in Appendix A conduct much more comprehensive recycling programs that include collection of mixed paper, aluminum, metal, glass and plastic containers, plastic films, food and other organic waste, packing peanuts, fluorescent bulbs, shipping pallets, store fixtures, and other materials. Some malls have established centers for the exchange and reuse of store fixtures recovered from remodeling and renovation projects.
- » **Committed facility managers are key to successful programs.** While regulations requiring commercial recycling underlie some programs, the leading mall recycling programs appear to be more dependent on committed mall managers than on government mandates.
- » **Effective facilitation of tenant participation in recycling and appropriate infrastructure are characteristics of leadership mall programs.** Mall recycling programs with the highest rates of tenant participation are characterized by ease of participation and/or property manager requirements that tenants recycle. The leadership malls profiled in this report provide space for separate compactors/dumpsters for storing recyclables and some pick-up recyclables directly from their tenants' front or back doors. One leading retailer is currently studying the "right sizing" of its stores to optimize a range of factors, including space for recycling and efficient waste pickup. In addition, some new malls are covered by building codes that mandate space for recycling bins in commercial spaces.
- » **Leadership malls have programs to help improve tenants' recycling performance.** Several malls profiled have recycling managers who provide training and orientation on recycling to new tenants and new store managers. Some malls

also conduct waste audits of tenants' waste disposal and recycling performance and provide feedback to tenants on how they can improve. Further, several malls require tenants to participate in recycling programs or structure their programs to provide incentives for tenants to participate (such as requiring non-participants to contract for their own waste hauling services).

- » **Several retailers have experimented with reverse logistics and backhauling programs to aggregate recyclable materials from stores for centralized recycling.** For instance, one retailer's distribution centers in California and Oregon take back plastic film from its stores for recycling. Another retailer engaged in a pilot project with one of its major suppliers to have its delivery trucks backhaul recyclables.
- » **Some retailers have programs to minimize their overall generation of waste beyond recycling programs.** Their source reduction activities include encouraging deliveries in reusable shipping packaging, reducing the use of packaging and cleaning supplies, and donating returned goods to local charities and community groups. One retailer also donates used cardboard boxes to local food banks for their use.

Common Obstacles

Retailers, property managers, waste haulers, and recycling experts cited a number of obstacles to more widespread implementation of recycling in mall locations. Commonly cited obstacles included:

- » **Many tenants do not address recycling in lease negotiations with property owners.** A number of interviewees noted that the time to address recycling services is when the lease is being negotiated, but that many store managers and corporate real estate negotiators do not press property owners and property managers to offer recycling services or include provisions about recycling in their leases.
- » **The structure of leases and waste disposal fees may not provide property owners or tenants incentives to increase recycling.** Property managers typically pass their waste hauling costs on to tenants as part of their Common Area Management (CAM) fees and have little incentive to initiate recycling efforts particularly when the costs of waste disposal constitute an insignificant part of a mall's overall operating costs, there is little financial inducement to initiate recycling programs. On the tenant side, since CAM fees are often based on a store's square footage rather than on its waste generation, the fees do not provide tenants a clear market signal to reduce waste and increase recycling.
- » **The economic benefits of recycling may not accrue directly to the retailer.** All of the malls profiled in this report noted that any economic benefit derived from their recycling programs was captured by the property management company in the form of reduced facility operating costs (see the next section for a more detailed discussion of recycling economics). This benefit was generally not passed along to

- the tenant, however. While we were able to identify cases where recycling programs are saving malls money, the general perception among the property owners interviewed was that recycling imposes additional costs that will have to be borne by the tenants.
- » Retailers have the greatest opportunity to capture any economic benefit from recycling when they control the waste management services for their stores directly.
 - » **Lack of adequate space and/or convenient recycling procedures can be constraints on recycling.** Many retailers cited as an important barrier small backrooms and lack of appropriate infrastructure in malls to allow for the collection and storage of recyclable materials. By contrast, mall managers generally do not see space, at least that needed for the aggregation and storage of recyclables as a significant obstacle to recycling (except possibly in older malls). Having to self-haul recyclables long distances within a mall to recycling receptacles or depots was also cited by retailers and others as a factor that can discourage store participation.
 - » **Lack of store manager and employee support for, and participation in, recycling efforts pose important obstacles to implementing mall-wide recycling programs.** Interviewees cited cases where store managers did not support new recycling initiatives under consideration by mall managers. In cases where recycling programs exist, property managers noted that inconsistent participation by store managers and their employees and/or their failure follow the mall’s recycling procedures affects yields from their programs – both in terms of the quantity of the recyclable material recovered and the degree to which the recovered material is contaminated by the presence of non-recyclable materials or substances that impair its recyclability. The high turnover of retail employees and the difficulty of communicating with floor staff from corporate headquarters add to this challenge.
 - » **The absence of government pressure to recycle and/or the lack of local recycling infrastructures deter implementation of mall-based recycling.** Malls located in regions of the country where there are no state or local policies to encourage or mandate recycling and/or where recycling service providers are few or non-existent, have little incentive to institute recycling efforts.
 - » Further, regional variations in materials that can be recycled make it difficult for corporate environmental managers to give generic guidance to all stores. Participating retailers have initiated a number of strategies to address this obstacle, including store manager training, peer-to-peer exchange among store managers, and grassroots employee “green teams”.
 - » Several recycling experts noted that outreach from local governments is often useful in motivating property managers to consider initiating, and tenants to consider participating in recycling programs, but noted that it is important for retailers to communicate corporate policies supporting recycling to ensure that store managers voice their support for these efforts.

Economic Issues

The cost to implement recycling generally did not emerge as a major barrier to increasing retail recycling in malls. The economics of recycling vary by community and are driven by the cost of waste disposal primarily and, secondarily, by current market rates offered for recyclable commodities, such as OCC. However, in many localities, recycling is cheaper than waste hauling and can both reduce waste disposal fees and provide a source of revenue from the sale of some recyclable commodities (particularly OCC). One retailer found that recycling its stores' waste streams (made up mostly of paper) was three to five times cheaper than disposing of it.

Further, it is worth noting that the leadership mall recycling programs profiled are generating significant savings for the mall management companies implementing them and that the managers of those facilities use these savings as the primary means of justifying the programs to their corporate management. Measuring the economic savings generated by a mall's recycling program is a relatively straightforward calculation:

$$\text{Savings} = (\text{avoided waste disposal costs} + \text{income from the sale of recyclable materials}) - (\text{added cost to implement and manage the recycling program})$$

Depending on how a mall is charged for waste removal services, the **avoided waste disposal cost** can be based on one or a combination of the following: a weight or volume-based fee; and/or a flat fee or charge per pull. In either case, these fees are driven by the hauler's cost to pick-up, transport and tip the collected solid waste at a local or regional disposal facility (i.e., a landfill or waste-to-energy plant). In areas of the country where the numbers of such facilities and their fill/handling capacities are relatively scarce, the cost of disposal can be significant and a major incentive to reduce or divert waste into less costly avenues like recycling. Avoided disposal costs reported by the malls featured in this report reach as high as \$40,000 per year.

While the opportunity exists for mall managers to receive **income from the sale of recyclable materials** they collect, the amount they receive varies considerably by: material type; the volume generated; market price changes; and geographic location of the mall. Generally speaking, recycling income to malls comes from revenue sharing arrangements with recycling service providers who actually sell the collected and processed recyclables on their behalf.

Malls may or may not incur **added costs to implement and manage a recycling program** along side their waste disposal programs. Cost items may include custodial staff time related to the collection of recyclables and the time needed for their training and education, bins for conveying recyclables to staging areas, compactors and/or dumpsters for storing recyclables separate from trash, and pull charges by the recycling service provider. It is important to note that the relevant measure of these costs is the amount by which they add to the mall's overall waste management costs. Since recycling programs often reduce a mall's disposal requirements (like the number of trash compactors/dumpsters and/or the frequency of pulls by the trash hauler), it is generally the case that the addition of recycling equipment and pulls

simply substitute for those reduced disposal service needs with little to no increase in the facility's overall waste management costs.

In general, the economic benefits of the mall recycling programs profiled in this report accrue almost exclusively to the mall owner/management company. The monetary costs to tenants for these best-practice recycling programs appear to be minimal to non-existent. In some cases, the programs have helped keep malls from raising CAM fees over time. However, the savings from these programs are generally not shared with tenants. Some retailers are seeking ways to share in the savings and revenues generated by successful recycling programs.

In a 1997 analysis of resource efficiency in retail centers including regional shopping malls, Global Green USA noted the potential significance to mall owners of sharing operational savings from "green" initiatives like recycling with their tenants. According to Global Green USA, mall owners who offer attractive lease rates resulting from shared savings can lower their vacancy rates and/or accelerate their absorption rates.²

Recommendations for Retailers

Based on this research, retailers seeking to demonstrate environmental leadership and a strong commitment to recycling should adopt a corporate-level strategy that includes the following key action steps:

- » Establish a corporate policy promoting recycling in store locations and communicating the policy to store managers, real estate, store operations, and other staff who interact with property owners and property managers.
- » Evaluate each store's performance in implementing recycling policies and hold appropriate headquarters personnel, district managers, and store managers accountable for their performance. Include recycling performance in operational audits of stores and performance-based compensation systems for store managers and other key staff.
- » Ensure that recycling services are provided for stand-alone stores where the retailer controls waste management contracts.
- » Incorporate provisions for recycling services into letters of intent and leases with property owners (see Appendix B for model lease language regarding the provision of recycling services.).
- » Conduct waste audits to better understand opportunities to reduce or recycle store waste streams.

² Global Green USA. 1997. *Study of Resource Efficiency in Retail Centers*. Santa Monica, CA.

- » Focus efforts to initiate or expand recycling services in those geographic areas where the costs of waste disposal and/or government mandates provide a strong incentive to recycle. (See Appendix C for a list of states and localities where there are significant waste disposal costs and/or clear opportunities/requirements for businesses to recycle.)
- » Educate property management companies about the economic opportunities associated with recycling programs and promote joint gain sharing from these programs.
- » When interacting with developers planning new malls or renovations at existing locations, express the need for appropriate infrastructure that will facilitate recycling.
- » Educate store managers and employees about ways to recycle, your corporate commitments to recycle, and the financial and environmental benefits of recycling.
- » Work with suppliers to cut store-level waste generation. Evaluate opportunities to reduce merchandise packaging, switch from one-way shipping boxes to returnable/reusable shipping containers, and implementing take-back programs for certain equipment, such as hangars and toner cartridges.

How retailers execute any or all of these recommendations depends in large part on each company's culture and practices for interacting with employees, property owners, and suppliers. For instance, some retailers may choose to require recycling services in their standard lease language, while others could merely encourage store managers to begin a dialogue with their mall managers about improving recycling services.

Recommendations for Property Owners/Managers

Property managers and property owners seeking to demonstrate environmental leadership and a strong commitment to recycling should:

- » Establish a corporate policy that promotes environmentally sustainable business practices (including recycling) in mall locations and communicating the policy to facility managers and service providers including waste management contractors.
- » Establish performance expectations for facility managers and waste management contractors that make recycling a standard feature of basic operational practice.
- » Adopt, on a more widespread basis, the practices exhibited by the leadership mall recycling programs described in the case studies found in Appendix A of this report.
- » Structure CAM fees to provide tenants with incentives to reduce their waste generation and participate in recycling programs.

- » Ensure that new and renovated malls are designed with adequate infrastructure for recycling, including appropriate space both inside and outside for collecting recyclables.
- » Provide compactors and other portable collection infrastructure to facilitate recycling in older malls that don't have adequate space for recycling.

Opportunities for Aggregators, Waste Management Companies and Recycling Service Providers

There is a business opportunity for enterprising aggregators, waste management companies and recycling service providers to differentiate themselves from their competitors by aggressively offering recycling services to their mall and retail clients. The retailers who commissioned this study represent the leading edge of companies that are committed to raising the social benefits and minimizing the environmental consequences of their business activities. The retail participants in this project view recycling as one of the areas of opportunity to reduce their environmental footprint and are seeking innovative partners with the expertise to help them achieve their waste reduction objectives.

BSR's Commitment

BSR is prepared to assist interested retailers in working with property managers and local recycling officials to promote more effective waste handling. Appendix C provides insight into geographic regions of the country where the economic and/or regulatory environment would favor such projects. Further, at the suggestion of some retailers and property managers, BSR is prepared to organize a conference to engage those parties, municipal recycling officials and private recycling companies in crafting mutual strategies to advance recycling.

ACKNOWLEDGEMENTS

This report is the result of research and interviews with individuals representing a wide range of organizations including retail companies, mall owners and managers, recycling and waste management companies, state and municipal recycling agencies and consulting firms. Nine retail companies formed the core advisory group to the project. We especially recognize the following companies – the Aveda Corporation, Starbucks Coffee Company, Nordstrom, and Eddie Bauer - for their prominent roles in the project.

APPENDIX A

Leadership Mall Recycling Programs: Case Studies

Case Study 1

Name	Clackamas Town Center
Location	Clackamas, OR
Type of shopping center/number of stores	Enclosed, two level mall. 185 stores, including food court and 5 anchor stores.
What drove program implementation?	Outreach by and assistance from the county.
Who manages the program?	County managed pilot project. Hauler manages ongoing OCC program.
How long has the program existed?	9 month pilot project undertaken in 1999. Pilot was not permanently implemented. Voluntary OCC recycling (self-hauled to 2 on-site compactors. There are separate, dedicated OCC containers for Food Court tenants) in place.
Tenant participation – how many, what determines, how are they educated?	County surveyed and interviewed tenants to determine concerns and barriers to recycling. County provided periodic flyers to each tenant announcing beginning of program, changes in collection schedules and program termination. Contaminated and unacceptable materials were returned to the generator by the collection crew who explained why the material could not be recycled.
Operational details	Daily, store-by-store backdoor collection. Voluntary participation by tenants.

<p>Materials recovered</p>	<ul style="list-style-type: none"> - tenant flattened OCC; - separately bagged (by tenant): <ul style="list-style-type: none"> - mixed paper & newsprint; - aluminum; - plastic bottles <p>Results:</p> <ul style="list-style-type: none"> - 48% increase in tons of material recycled - Percentage of total solid waste generated that is recycled increased from 16% to 23% - total solid waste requiring disposal decreased by 3%
<p>How are program costs/benefits assessed?</p>	<p>Reduced garbage disposal costs plus recycling revenues yielded an annual estimated cost savings to the mall of \$6,900. (Calculation does not include cost of recycling collection program).</p> <p>If permanently implemented, the program would have required an additional charge of \$5 - \$15 per month to each tenant's bill.</p> <p>Garbage and OCC collection charges are billed directly to the tenant by the waste hauler and are not part of the tenant's CAM fee.</p>
<p>Unique features</p>	<p>Door to door collections were conducted by a contractor that employs and trains disabled workers.</p>

Case Study 2

Name	Bellevue Square Mall
Location	Bellevue, WA
Type of shopping center/number of stores	Enclosed mall with 200 stores.
What drove program implementation?	Outreach by and assistance from the City.
Who manages the program?	Mall management – Kemper Properties
How long has the program existed?	Since the early 1990's.
Tenant participation – how many, what determines, how are they educated?	Voluntary participation by tenants.
Operational details	<p>Tenants self-haul recyclables to one of 3 designated recycling service areas.</p> <p>Mall provides back door pickup (on an as requested basis) of OCC for high volume generators. OCC is accepted at all recycling service areas from both levels of the mall.</p> <p>Mixed paper is accepted at all recycling service areas, but from first level tenants only.</p> <p>Glass bottles are accepted at 2 designated recycling service areas, but from first level tenants only.</p> <p>Pulls of recyclables from the mall are serviced by a recycling company and not the trash hauler.</p>
Materials recovered	<ul style="list-style-type: none"> - OCC - mixed paper - glass - packing peanuts - fluorescent tubes (beginning in 2002) - stretch film (beginning in 2002)
How are program costs/benefits assessed?	There is no separate accounting. Net charges are incorporated into rent or CAM fee.
Unique features	N/A

Case Study 3

Name	Vanity Fair Outlet Village
Location	Reading, PA
Type of shopping center/number of stores	Enclosed, multi-story mall. 85 retail tenants plus office space
What drove program implementation?	Management interest in reducing disposal costs.
Who manages the program?	Mall management – VF Corp.
How long has the program existed?	Since early 1990's
Tenant participation – how many, what determines, how are they educated?	Tenant participation is mandatory. New tenants are given orientation to recycling program by the mall's recycling manager.
Operational details	Tenants self-haul separated materials to designated recycling locations that are equipped with balers and/or bins. Recycling bins for customers are located within and on the grounds of the Village. Custodial staff empty inside bins and sort materials. Grounds crew empty outside bins and sort materials. Pulls of recyclables from the mall are serviced by a recycling company and not the trash hauler.
Materials recovered	<ul style="list-style-type: none"> - OCC - Mixed paper - Metals (ferrous and non-ferrous) - Glass - Plastics (film and bottles) - Shipping pallets - Landscape waste composted on-site
How are program costs/benefits assessed?	In 2001, OCC yielded income of \$10,540 and avoided hauling and tip costs of \$2,551. Benefits accrue to and are retained by mall management.
Unique features	Mall offers shoppers the ability to recycle bottles and cans. Mall management has set up a reuse center for tenants with fixtures taken from store renovations.

Casey Study 4

Name	Mall of America
Location	Bloomington, MN
Type of shopping center/number of stores	Multi-level, enclosed mall. (420 million square feet) 520+ stores, 50 restaurants, 8 nightclubs, 7-acre theme park, 1.2 million gallon aquarium.
What drove program implementation?	Management initiated to reduce disposal costs.
Who manages the program?	Mall management – Simon Properties
How long has the program existed?	Since 1993.
Tenant participation – how many, what determines, how are they educated?	Mall’s recycling manager meets regularly with store managers to keep them apprised of recycling requirements. Management conducts periodic audits of tenants’ waste and gives feedback on how well they are/are not recycling.
Operational details	Tenants self-haul OCC to one of 6 chutes. Custodial staff then collects and hauls the accumulated OCC to 2 compactors. Mall uses separate recyclers for plastic film and food waste from the company that hauls its trash.
Materials recovered	<ul style="list-style-type: none"> - OCC (2 pulls per day on average) - Mixed paper - Plastics (film and bottles) - Glass - Aluminum cans - Light bulbs and fluorescent tubes - Food waste and grease - Construction materials - Pallets - Landscaping waste - Packing peanuts - Automobile batteries and tires - Used motor oil, oil filters and anti-freeze - Hydraulic fluid <p>Results:</p> <ul style="list-style-type: none"> - Mall has achieved a recycling rate of nearly 55% (i.e., nearly half of all the solid waste generated has been collected for recycling).

How are program costs/benefits assessed?	Tenants pay a monthly recycling charge based on their waste audits.
Unique features	N/A

Case Study 5

Name	Shopping Town
Location	Dewitt, NY (Syracuse area).
Type of shopping center/number of stores	Enclosed mall. 130 retail tenants, plus 6 anchor stores
What drove program implementation?	County ordinance that requires recycling at commercial establishments.
Who manages the program?	Mall management – Wilmorite Corp.
How long has the program existed?	Since 1995.
Tenant participation – how many, what determines, how are they educated?	Tenant recycling is mandatory per the county ordinance. “Tenant participation has never been a problem, even when store management turns over.”
Operational details	Recyclables are collected from each store once a week (Sunday) by mall custodial staff. Tenants sort/separate recyclables and leave in empty corrugated boxes at front of store. Custodial staff haul recyclables to one recycling area and place in bins for pick-up by hauler. Recyclables picked up by same firm that hauls trash from the mall.
Materials recovered	<ul style="list-style-type: none"> - OCC - Office paper - Newspaper and inserts - Magazine/catalogs - Junk mail - Envelopes, folders, etc. - Glass - Plastics (1 & 2) - Metal - Fluorescent tubes will be collected starting in 2002. <p>Average monthly OCC generation = 17 tons. High months (November/December) OCC tonnage = 30+ tons.</p>

How are program costs/benefits assessed?	“Any savings are negligible.”
Unique features	Mall received recognition as the only shopping facility in the county that is in full compliance with the county’s recycling ordinance.

Case Study 6

Name	Westfield Shoppingtown Mission Valley
Location	San Diego, CA
Type of shopping center/number of stores	123 stores, 3 major anchor stores, 10 “mini-major” anchors.
What drove program implementation?	State law required businesses to reduce their waste disposal streams by 50% from 1990 levels by 2000. The mall’s Asst. GM was also personally committed to implementing a recycling program. He had started a program at a sister mall in Carlsbad, CA in 1993.
Who manages the program?	Mall management – Westfield Corp.
How long has the program existed?	Since 1997.
Tenant participation – how many, what determines, how are they educated?	<p>Tenant participation in the program is voluntary, but if the retailer does not choose to recycle or recycles in a manner inconsistent with the mall’s program, the mall will not provide trash removal services for that tenant.</p> <p>Tenant participation is 100%.</p> <p>Tenants are visited by mall management on a regular basis and given feedback/training on the recycling program.</p>
Operational details	<p>Mall custodial staff pick up source-separated recyclables and trash from the tenant’s front or back door every day after closing.</p> <p>Tenants may request special pick-ups on an as-needed basis – any time of day.</p> <p>Tenants are expected to separate recyclables by type of material.</p> <p>Pulls of recyclables from the mall are serviced by recycling company (Resources Management Group) and not the trash hauler (Waste Management).</p>
Materials recovered	<ul style="list-style-type: none"> - OCC - White paper - Mixed paper - Plastics (film, foam, bottles) - Glass bottles - Steel and aluminum cans

	<ul style="list-style-type: none"> - Copper - Aluminum - Wood - Chairs, tables - Carpeting - Store fixtures - Grass clippings and other green waste - Cooking oil, grease and food waste - Asphalt and broken concrete
<p>How are program costs/benefits assessed?</p>	<p>Trash collection is a listed cost in almost all tenant leases.</p> <p>There has been no increase in this cost since 1996.</p> <p>Recycling service by RMG is set up as a no cost operation to the mall. RMG provides compactors and bailers at no cost to mall. Mall pays no recycling service fee, but does receive a portion of revenues from the sale of certain materials like OCC when the sale price of those materials exceeds an established (by RMG) base level.</p>
<p>Unique features</p>	<p>Mall has been a multi-year winner of the state's Waste Reduction Awards Program (WRAP) achievement awards.</p>

APPENDIX B

Model Lease Language for Recycling Services

TRASH REMOVAL. Landlord shall provide a lawful location on the Property, enclosed if required by code and convenient to the Premises, for a three or four cubic-yard trash container and recycling bins for trash disposal and recycling exclusively for Tenant's use; or, if Tenant is sharing a trash dumpster supplied by Landlord, Tenant will pay its share of the costs of such dumpster based on the square footage of Tenant's store compared to the total square footage of all tenants sharing the trash dumpster.

APPENDIX C

States and Localities with Conditions Conducive to Business Recycling Programs

Geographic Area	Factors Facilitating Mall Recycling
Atlanta, Georgia	Strong recycling infrastructure, including materials recovery facilities (MRFs) that accept a range of recyclables.
Boston, Massachusetts	High waste disposal tipping fees.
California	High tipping fees in some locations. State mandate of 50% waste diversion. State law encourages local governments to set commercial recycling mandates. High level of environmental awareness by the public.
Connecticut	State mandate for commercial recycling.
Florida (Miami, Dade County)	High tipping fees. Local government mandates for commercial recycling.
Maine	State mandate for commercial recycling
Maryland	State law encourages local governments to set commercial recycling mandates.
Minnesota (Minneapolis and elsewhere)	State law encourages local governments to set commercial recycling mandates. Waste taxes and high tipping fees.
New Jersey	State mandate for commercial recycling.
New York	State law encourages local governments to set commercial recycling mandates.

North Carolina	State law encourages local governments to set commercial recycling mandates.
Pennsylvania	State mandate for commercial recycling.
Portland, Oregon	<p>City has an innovative “right to recycle law” which states that haulers can’t charge more for recycling than waste hauling, so commercial sites don’t have to pay more to have recycling picked up.</p> <p>High level of environmental awareness by the public.</p>
Rhode Island	State mandate for commercial recycling.
Tennessee	State law encourages local governments to set commercial recycling mandates.
Washington state	<p>High tipping fees.</p> <p>High level of environmental awareness by the public.</p>
Wisconsin	State mandate for commercial recycling (de facto because of a landfill ban on recyclables).