



**Implementing Successful School Recycling Programs:  
A Handbook for Teachers and Schools**

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## 1. Report Summary

The purpose of this report is to inform Boards of Education, School Administration, teachers and students about the issues and opportunities related to solid waste and recycling in the school systems. The report is designed to identify options available to the school systems that will successfully divert materials from the waste stream and be recycled. This report gives key decision makers a detailed description of recycling program options, design evaluations, and recommendations for program implementation.

## 2. The Importance of School Recycling

School recycling programs offer the opportunity to reduce the solid waste stream, educate on proper waste reduction practices, and instill a sense of leadership and responsibility in young people. Our schools possess a unique opportunity to form the behaviors of people during the earliest stages of development though adolescence. They are the learning environments where children learn the behaviors they will adopt for their lifetimes.

EPA estimates that typical a municipal solid waste stream is 34% paper<sup>1</sup>. As one might imagine, paper is the largest segment of a school system's waste, followed by organics. Paper is easily recyclable and is a valuable commodity, the sale by which helps local governments operate efficient and economical recycling programs. Recycling as much material as possible also helps to extend the life of local landfills. Therefore, it is important to your community for your school system to divert valuable material to local recycling programs.

Implementing school recycling programs also supports lessons on environmental stewardship and conservation taught in science and social studies curricula. By implementing recycling programs, schools become a hands-on learning environment where students learn to practice the behaviors of environmental stewardship and good citizenship by reducing waste and participating in a recycling program.



*Students at Bell Elementary, Asheville, have an active and essential role in the recycling program*

Many local governments have a stake in seeing school systems successfully implement recycling programs because of statewide waste reduction and diversion goals. North Carolina has a stated goal of 40% waste reduction over the baseline year, FY 1991. Many communities have adopted a similar goal for their communities to reflect the state's goal. School recycling programs are just one of the many strategies a local government can implement to help reach the 40% waste diversion goal.

## 3. Background information on Recycling

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<sup>1</sup> US Environmental Protection Agency, Municipal Solid Waste webpage, [www.epa.gov/msw](http://www.epa.gov/msw). 2007



Reducing waste, reusing materials and products, and recycling are some of the most powerful ways individuals, households, institutions and businesses can protect their communities and the environment. Recycling greatly reduces the amount of material buried in our local landfill which extends the landfill lifespan. In addition to preserving landfill space, there are many reasons why recycling is good for our communities. Here are just a few examples<sup>2</sup>:

**Recycling saves natural resources:** Reusing discarded products and using recycled materials to make new products reduces the use of virgin materials, which often involves harvesting trees and mining the earth. Even better, “source reducing” waste — or avoiding the generation of discards in the first place — saves the most resources of all.

**Recycling prevents environmental problems that come from landfills:** Few people want a landfill in their neighborhood. Unfortunately, we will need landfills as long as we choose to dispose of waste. Although landfills today are much safer than 20 years ago, they are still a poor use of land, a potential source of groundwater contamination and produce the release of methane and other gases.

**Recycling saves energy:** Enormous amounts of energy are required to make products and materials worldwide. Energy is saved by not using products and materials when at all possible, or by reusing products in their current form. Tremendous energy savings come from using recycled instead of virgin materials in manufacturing.

#### 4. Getting Started on a School Recycling Program: Ask the Right Questions

Upon asking around, one would discover that most schools have had some experience with recycling programs. A common school recycling story is one that begins with a champion teacher or parent who organizes a program at their school individually. The program begins with good level of support, but has little commitment beyond a blessing from upper level administration or the School Board. There are numerous fights along the way, such as resolving who is taking the material to a recycling center that week, which classroom isn't participating with the program, etc. Regardless of the program's success, for an individual or even group champion, burnout is almost inevitable and if not, then it is likely the program will fail once that key teacher or parent moves on.

The question remains: *how does one design a school recycling program that ensures its longevity and sustainability from the beginning?*

The answer to this question will be different for many school and school systems, depending on a number of factors that need to be considered. There are a few basic elements of a successful program:

##### a. Basic Components of a Successful School Recycling Program:

- Good programs have strong support from Administration and School Board
- There is an organizational system that allows communication across the school (or school system) quickly and a hierarchy for following direction from upper administration.
- Teachers and students are involved with collection
- Teachers have the opportunities to attend workshops related to school recycling and can obtain resources for teaching recycling in the classroom.

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<sup>2</sup> Examples of the benefits of recycling from NC Division of Pollution Prevention and Environmental Assistance.

- Good programs also have funding to ensure recycling bins can be replenished, teacher resources and other program needs can be provided.

Based on those key elements, there are a few questions to start with and frame your group’s intentions for a recycling program. Consider beginning your brainstorming process with these questions:

**b. Questions for School Recycling Program Pre-Planning**

- *Is there strong leadership to keep the ball rolling through the planning process?*
- *Who are the key stakeholders?*
- *Do we want to set up a school-wide program or a system-wide program?*
- *Who is the solid waste hauler contracted with the school (school system)?*
- *Who might be able to provide recycling collection services?*
- *What materials are we targeting for recycling?*
- *How much will students and teachers be involved?*
- *How would the program operations work so that it is convenient, simple, and fun to recycle?*
- *How will we communicate recycling program information quickly through the schools?*
- *What are our funding needs?*
- *What funding opportunities might we be able to take advantage of?*

**5. Planning Your School Recycling Program**

Now that you have given some thought to these initial questions, bring key stakeholders together to discuss the options for school recycling programs in your area. First and foremost, you want to be sure and find a leader for the program who can carry it forward, someone who will be dedicated to the process. This person may be the local Recycling Coordinator, Solid Waste Director, or even someone within the school system.

***Identifying Key Stakeholders***

Key Stakeholders for school recycling programs will mostly come from three main organizations: the school board, a local solid waste department and the solid waste/recycling hauler. It is a good idea to get a representative from relevant groups or any organization that can bring value to your program, such as educational services, promotion, etc.



*A student gets help from her teacher how to keep record of recycling volume*

Here are a few stakeholders that are recommended to bring into the discussion and the role they play in program operations:

- School System Superintendent – sets the tone for the program throughout the school system by raising the importance of recycling to a priority, ensures the program continues, provides top-down support, and assigns principals to assign a Recycling Coordinator at every school.
- School System Facilities Manager/Maintenance Director – serves as a primary point of contact between Recycling Coordinators and solid waste/recycling haulers, updates recycling coordinators on changes in program, helps troubleshoot operational challenges, distributes printed materials on proper recycling practices (what one can and cannot recycle, etc).
- Solid Waste Hauler and/or Recycling Hauler – provides the solid waste and/or recycling services to school system (these may be two different companies or service providers), works with school system to find an economical solution to the need for recycling collection services.
- School Recycling Coordinators – acts as the primary point of contact for the school’s recycling program, coordinates a single school’s recycling operations, may be more than one Recycling Coordinator per school, likely established once the program starts, informs their school about recycling procedure, shares lesson plans with other teachers, champions the program at their school, hands out any kind of activity books or incentives to the kids to reward good recycling behaviors
- Local Government Solid Waste Department – offers assistance to the school system wherever possible (especially in regards to funding for recycling bins or other program needs), may provide recycling collection services to their schools, distributes information about public recycling program through Recycling Coordinators, provides publicity or other promotional opportunities.
- School Board Member – keeps updated on school recycling program activities and reports back to the School Board, has ongoing knowledge of program incase of a shift in Administrative staff, also works to provide financial support for specific needs should the program have challenges.
- Parent/Teacher Association (PTA) members – keeps parents informed of the progress of the program, assists the program find resources, host pizza parties or otherwise helps drum up positive publicity and reinforcement of the program.
- Local civic and community groups (e.g. Keep America Beautiful or other environmental/beautification organization) – offers publicity opportunities and promotes



*Polk County teachers and students participate in a workshop about recycling at Land-of-Sky Regional Council, 2006*

the school recycling program in local communities, also promotes public recycling opportunities in the community through the schools.

***Deciding if you want a System-wide or a School-wide Recycling Program.***

Establishing a system-wide school recycling program is a big endeavor. But then again, so is a school-wide recycling program. Both require organization and planning, both require effort. A system-wide program can offer your community the greatest opportunity for resource recovery and for community pride. However, resources are needed to carry either successfully into the future.

A system-wide program has major advantages. A recycling program can be established that is the same at every school in the system – same bins, same types of materials collected, and the same participation is expected from participants. This helps keep the program convenient and easy. If students, teachers or families move to another school in the system, they will still know how to use the program and what is expected of them. Having a school-wide program also helps to ensure the sustainability of the program; because everyone recycles across the school system, it is harder for one school to slide out of recycling (a little peer pressure goes a long way for a good cause!).

It is highly likely at some point in setting up a school recycling program you will be working with the contracted solid waste hauler that collects the refuse for the school system. Working with them may uncover unseen opportunities to help defray the costs for the recycling programs (such as renegotiating the contract) or discover other ways of collecting recyclable material (see case studies below for detail). This is another key opportunity to establish a system-wide program: in the case of a contractor who provides services system-wide, whatever services they can offer for one school within the system that service can be offered for all schools.

However, a system-wide program requires resources and at first, needs grooming and attention. A full-time employee may not be necessary, but it is helpful to have a few key stakeholders working together frequently as the program is established. If the only option is to implement a school-wide recycling program, set it up in the same way you would system-wide, with a recycling coordinator and a dedicated service. Start with one school and use it as a pilot to show decision makers how the program could be implemented system-wide. Even if it never grows beyond that school's bounds, your group still might've solved a lot of questions and paved the way for future efforts.

***Working with the Solid Waste Hauler and/or Recycling Service Provider***

This is a relatively straightforward task. Find out from the maintenance department who is the contracted service provider for the school system. Talk with them about the interest and opportunities around a recycling program. Find out if there are ways to offset some of the waste disposal costs if the schools start a recycling program. Develop a relationship and learn where the material goes that they're hauling. Also, find out if there are any recycling companies nearby that might be interested in working with the school systems. The local Solid Waste Department may be able to assist this investigation.



*GDS is the waste hauler for Buncombe County and Transylvania County Schools. This company figured out a way to offer a comprehensive recycling program at no additional cost to the schools.*

### ***Deciding What Materials to Collect***

Based on the availability of recycling collection and processing services (either through a dedicated recycling company or through your solid waste company), this may determine the types of materials that could be targeted for recycling. Traditionally, most companies take aluminum cans, glass bottles, plastic bottles (#1 and #2), steel cans, mixed paper, and cardboard. However, every area is different. Make sure you discuss your recycling plans with the waste/recycling haulers before getting started.

### ***Designing Program Operations***

Basic program operations are very simple. Decide what the collection points will be within the school (classrooms, lounges, hallways, assembly rooms, etc) and where the collection point will be outside the school (near dumpsters or maybe there are dumpsters for recycling collection). Then, decide **how** the material is getting from one place to the other, **who** is transporting the material and **when** (what day of the week and how frequently). It's that simple.

As an example, take a look over this prescribed system from the Buncombe County Schools recycling handbook. As required by the solid waste hauler and recycler, they bag up mixed paper and mixed containers and transport these materials to a recycling dumpster outside the school. The materials are all collected and taken to a recycling facility. Please note not every system may necessarily require bagging recyclable material this is just one way to accomplish the goal. This information simply provides a step-by-step description of one system's recycling program operations.

### ***Excerpt from Buncombe County Schools Recycle: A Handbook for Teachers (Land-of-Sky Regional Council, 2005).***

Your school may or may not already have a recycling program of its own in place. Either way, you already know what works best with your teachers, students and staff. This page gives general guidance on some considerations to make when designing a recycling program. While there are some requirements (such as all paper and containers must be bagged), how those materials are collected is entirely up to you!

Here are some steps getting started:

1. Designate a Recycling Coordinator at your school. This individual may be a teacher, staff person, or volunteer. They will be responsible for making sure recycling is collected by supervising the Recycling Team and serving as a contact person for questions.
2. Form a Recycling Team made of students, teachers, and anyone who wants to get involved. The team will be responsible for collecting the recyclable materials and getting them properly to the Recycling Dumpster.
3. Have a discussion with your Recycling Team on the



*Getting the bins ready: student recyclers bring all the bins from one wing to the center of the hall and fill the recycling cart before it is wheeled out to the recycling dumpster*

best way to collect recyclable material within the classrooms. Paper must be in a bag when it reaches the dumpster but within the classroom there are two options:

- a. Option #1 - Line the recycling bins with clear plastic bags. When the Team comes by, pick up the bag, put it in the rolling cart, and replace with a fresh bag. If you find the bags have only a small amount of paper in them, consider consolidating to save bags.

-OR-

- b. Option #2 - Collect paper loose in the recycling bins, line the rolling cart with a bag, and place the paper in the bag. You may find this makes the bags a little heavier, so determine when it's appropriate to use a new one.

4. Have your Recycling Team decide the method for collecting recyclable material from the classrooms and other locations. Consider the following:

- a. Decide how often your Recycling Team will collect recycling - once a week or once every two weeks. Designate a collection day and time that will be consistent.
- b. If your Team is collecting during the school day, consider asking classes to place the recycling bin (or just the bag of paper) outside the door to minimize disturbance.

- c. Have your Recycling Team use a Rolling Cart to roll around from classroom to classroom and collect the bagged paper.

- d. Transport to the Recycling Dumpster and remove bags from the carts and place in the dumpster.



*It's all about teamwork: Students at WD Williams Elementary pitch in and make their recycling program work!*

5. Designate a storage location for your rolling carts. You may want to stow them away in a closet or at a safe location outside.

6. Distribute and/or post information at your school on how to recycle. You may use resources in this manual, such as the instruction page on p.6 or the ready-to-copy signs or other resources.

7. Clear bags for mixed paper and blue bags for containers are available for your school. Work with your Head Custodian or other staff person to order bags from the Central Office.
8. Contamination (putting non-recyclable items in the recycling) is an issue and may cause an entire bag to be discarded because of the non-recyclable material. Please work with your school to minimize the "don't recycle" items in your recycling.

Other Considerations:

- Since recyclable material is going in cardboard dumpster, you may notice your cardboard dumpster is filling up faster than usual. One way to make sure you've got enough space in your recycling dumpster is to be sure that cardboard boxes are broken down before they're disposed. Your Principal may wish to make that request directly with your Cafeteria Manager or through a general announcement.
- If your cardboard dumpster is too full to take the bagged recyclable material, please leave the bags outside the dumpster and call Nicole Wells at GDS (253-3929) to let her know you have additional recycling to pick up. Also, you may consider storing the bags temporarily in the rolling carts.
- Associate good behavior with being a member of the Recycling Team. For example, some schools have invited students with good behavior and/or good grades to join. However, if a student is interested in joining but perhaps hasn't had on his or her best behavior, consider offering them the chance to shine with the Recycling Team anyway. After all, recycling is something everyone gets to do!
- Consider monitoring your school's waste diversion by having the Recycling Team weigh the bags before putting them in the dumpster. This employs real-world math skills and teambuilding. Reward the classrooms with the highest diversion through pizza parties, etc.
- Start a contest related to your recycling program! Contests are opportunities to create excitement and enrichment around your recycling program. Depending on the grade level, poster contests, essay contests, or even group projects provide the



*Recyclers like their job!*

opportunity for learning more about the importance of waste reduction and recycling.

- Refer to the "Key Contacts" list for assistance, educational resources, and any other questions you may have.

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## 5. Planning Your Recycling Program (continued)

### *Choosing the Appropriate Recycling Bins*

Just like a trash can is the primary receptacle for refuse, recycling bins are the primary collection point for recyclable material. Bins should be durable, clearly distinguishable from trash containers and located at every location there is a trash can. There are many different kinds of bins you can choose from so that you can get the best bin shape and size to address the varying volumes of material and operational needs. Some of these bins are available on state contract or from vendors listed in the table following. Here are a few examples of bins and recommendations for best uses.



**Bin type:** Recycling Bin/Box

**Bin size:** 12, 14, or 16 gallon.

**Works well for:** classrooms, lounges, hallways. This bin works best for paper collection in classrooms because the paper lays flat once discarded. The mouth is wide for quick placement.



**Bin type:** Desk-side Recycling bin

**Bin Size:** 2.5 gallons

**Works well for:** offices, teacher's desk. Fits nicely in small office spaces just next to a trash can.

**Not recommended for:** classroom paper collection or bottle/can collection. This bin is just slightly too small for classroom collection. It does not hold much paper and would require frequent attention. More appropriate for offices where not as much paper is generated.



**Bin type:** Rolling Cart

**Cart size:** 35, 65, 95 gallons (or others, depending on vendor)

**Works well for:** collecting paper throughout the school going door-to-door, transporting recyclable material to outside collection point, storage bin for recyclable material between pick-ups, as a stand-alone collection point for automated pick-up systems.

**Not recommended for:** 95 gallon carts provide significant storage and transportation ability, but they can be too heavy for elementary school children to cart around, so pick a smaller size for smaller people.

**Notes:** rolling carts actually balance well despite their size.



**Bin type:** Round Recycling Container

**Bin size:** 20, 35 gallon (or other, depending on vendor)

**Works well for:** recycling at games and large assemblies, bottle and can collection, cafeteria collection.

**Not recommended for:** classroom collection.

**Notes:** Dollies and lids can be purchased that fit with these containers to make them transportable. These bins are comparable to trash containers of the same size, so a school may already have a dolly that will work. Bags fit nicely in these containers for trapping liquids associated with beverage container recycling.

### Recycling Bin Vendors with Contact Information

Name	Phone	Web Site
Amick Equipment	800-922-3795	<a href="http://www.amickequipment.biz/diakon1.asp">http://www.amickequipment.biz/diakon1.asp</a>
Busch Systems	800-565-9931	<a href="http://www.buschsystems.com/">http://www.buschsystems.com/</a>
IPL		<a href="http://www.ipl-plastics.com/ec-environ.html">http://www.ipl-plastics.com/ec-environ.html</a>
Mid-Point Intl	888-646-4246	<a href="http://www.midpoint-int.com/listing.mv?c=5">http://www.midpoint-int.com/listing.mv?c=5</a>
Otto	800-227-5885	<a href="http://www.otto-usa.com/en/products_rc.asp">http://www.otto-usa.com/en/products_rc.asp</a>
Recycling Products	800-875-1735	<a href="http://www.recyclingproducts.com/">http://www.recyclingproducts.com/</a>
Rehrig Pacific	800-421-6244	<a href="http://www.rehrigpacific.com/">http://www.rehrigpacific.com/</a>
Rubbermaid	800-347-9800	<a href="http://www.rubbermaidcommercial.com">www.rubbermaidcommercial.com</a>
Toter, Inc.	800-772-0071	<a href="http://www.toter.com/">http://www.toter.com/</a>
Ultra-Cart	800-899-7856	<a href="http://www.ultracart.net/">http://www.ultracart.net/</a>
Zarn	501-951-2045	<a href="http://www.zarn.com/">http://www.zarn.com/</a>

### ***Making a School Recycling Program Simple, Convenient and Fun***

A school recycling program can be a great opportunity to enhance student leadership and school pride. Making the program isn't difficult; kids naturally enjoy recycling programs when they are involved with collection and making sure everything runs smoothly. Young people respond amazingly well to having a job responsibility and performing it if they believe they're doing a good thing. Recycling programs at schools frequently fall into this category.



Students use a basic scale to calculate the school's total paper recovery

Recycling programs are convenient if people don't have to think a lot about them. Post good signage around the bins about what material can or cannot be recycled. Be sure the bins are emptied with enough frequency that a full bin won't discourage a recycler to put that material in the trash.

Make it fun by involving your PTA in planning contest and other competitions. Monitor recovery rates and have classrooms compete for which class recycles the most. Stage a poster or art contest for recycling-related drawings, paintings, etc. And nothing says program pride like a pizza party!

### ***Establish an Effective Organization and Communication System***

As one may note from the Buncombe County Schools example, a Recycling Coordinator was established at every school. The role of Recycling Coordinator serves two purposes: 1) to facilitate the collection of recyclable material and lead a team of students to do so and 2) to establish a point of contact for communicating with the staff at that particular school.

One strategy to success is start from the top and work with a top-level administrator, such as a Superintendent or Assistant Superintendent. These top-ranking officials can direct principals to assign recycling coordinators and ensure there is always a person to fill that job. If possible, find a way to compensate a Recycling Coordinator for their extra effort.

With a Recycling Coordinator established at every school, information can easily be passed down to everyone within a school or school system quickly. For example, emails can be sent to 30 Recycling Coordinators with the request that the message be forwarded on to all staff in a school. Education is the key to ongoing program support and participation, so be sure Recycling Coordinators, teachers, and students are updated regarding the recovery rates and impact the recycling program is making.

### ***Funding Needs and Opportunities***

Recycling is a vital part of the full waste management equation. Although it is considered by many to be the "right thing to do," that does not mean recycling is (or should be) free of charge. Like refuse service, recycling collection bins, collection service and training/technical resources will cost money. However, there are ways to minimize the financial impact and burden of the recycling program.

The major funding needs for a recycling program include the cost of recycling bins and carts, the cost of collection services, and any costs associated with teacher workshops and trainings. Be sure and have funding available in subsequent years after start-up for additional bins (when they break or get stolen, because they will) and for getting flyers and signs about the program reprinted.

## Ways to minimize the recycling line item in your budget:

- 1. Take advantage of grant opportunities.** The North Carolina Division of Pollution Prevention and Environmental Assistance offers an annual grant opportunity through which schools can request funding for equipment. See [www.p2pays.org](http://www.p2pays.org) for more information. There are also numerous grant opportunities from private foundations – just do some web searching and also check [www.grants.gov](http://www.grants.gov) for other public sources. Think about possible sponsors in your community as well – there are many businesses who would like a chance to be associated with doing good for their community and an opportunity for a tax write-off!
- 2. Work with your local government’s solid waste department.** There may be opportunities for the schools to participate in the public waste and recycling routes. Investigate what your county or municipal government might be able to offer.
- 3. Negotiate with the solid waste hauler.** Remember, you are paying for a volume of waste to be collected and disposed of in your solid waste contract. If you implement a recycling program, that’s a significant amount of material that no longer will be disposed of through the waste services. Discuss ways of cutting back on the waste bill with the hauler by possibly reducing the number of pickups (since there won’t be quite as much in the trash dumpsters). Or, if that’s an unpalatable option to school staff, monitor your recycling collection for a few weeks and share those figures with a hauler. If you are generating less waste and are diverting a significant amount of material to a recycling program, then it only makes sense for a hauler to be willing to cut you a deal. The difference in savings can be used to help pay for recycling services.
- 4. Keep the program running efficiently.** The more material that is collected, the more that can be sold for revenue, which will help your recycling provider offset their transportation costs of picking up the material from the schools. So keep up the energy and support for the program, find ways of increasing participation and

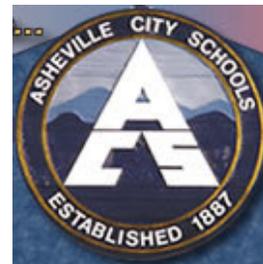
### 6. Case Studies on School Recycling in the Land-of-Sky Region: There’s More Than One Way to Win

There are many options to make a school recycling program work economically and efficiently in your area. Your stakeholder committee might have the resources to simply design a program and implement what the leadership would like to see. Or, your committee might need to look at what resources are present and design a program around what services or resources are available to maximize the efficient use of limited resources for the program.

To further illustrate how many different ways recycling programs can be accomplished in schools, the following are just a few examples from the Land-of-Sky Region in Western North Carolina.

#### Asheville City Schools (ACS)

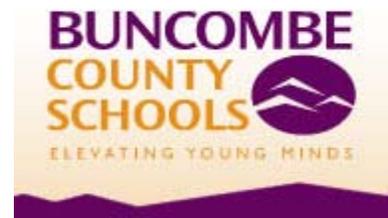
- **Number of Schools:** 7
- **Number of Students:** 3,798



- **Solid Waste and Recycling Provider:** Waste: Wyatt Waste; Recycling: Curbside Management.
- **Annual budget for program:** \$5,000 for service and additional containers.
- **Program Description:** ACS contracts privately for recycling services. Classroom bins are emptied into rolling carts that are wheeled out for collection directly from Curbside Management.
- **Highlights:** The program was historically paid for by a grant and when recycling coordinators realized if the schools would pay for the recycling services annually, then perhaps that grant money could be better used elsewhere instead of paying for recycling. The good news was by simply approaching the Superintendent with the recycling program's recovery figures and made a simple case for budgeting for recycling and using grant funds elsewhere, his answer was, "well, of course!" He thought the program had always been paid for out of the school budget and happily agreed to make sure the recycling program was always paid for.
- **Estimated Annual Recovery: 75,000 pounds**

### Buncombe County Schools and Transylvania County Schools (BCS and TCS)

- **Number of Schools:** BCS: 40; TCS: 8
- **Number of Students:** BCS: 25,000, TCS: 3,800
- **Solid Waste and Recycling Provider:** GDS, Inc. (Republic Waste Services)
- **Annual budget for program:** no separate recycling budget
- **Brief Description of the Program:**  
The School Administration's Challenge – find an option to recycle that doesn't cost the school system any money. Both school systems already had cardboard recycling dumpster service at every school. Upon inquiring about the cardboard recycling program, it was discovered that the cardboard was taken to a recycling facility where mixed paper and other materials were also recycled. The service provider simply agreed to negotiate with the recycling materials processor to allow for bagged paper and bagged containers to be placed in with the cardboard recycling load. Recycling bins were funded through two NC DPPEA grants, one for each school system. Through effective contract negotiation and grant writing, these recycling programs are highly cost-effective!
- **Highlights:** Both programs are fully operational with no costs to the schools. TCS's Business supervisor is especially active in this program which contributes tremendously to its success.
- **Estimated Annual Recovery: 800,000 pounds (BCS), 112,000 (TCS)**



### Henderson County Schools (HCS)

- **Number of Schools:** 21
- **Number of Students:** 12,466
- **Solid Waste and Recycling Provider:** All Bright Sanitation
- **Annual budget for program:** recycling program costs built into total waste management services
- **Brief Description of the Program:** The school system had been recycling paper for years and a mixed paper dumpster was employed for this purpose. The school system decided to expand



the program and collect mixed recyclable containers as well. When the School system bid out the waste services, they specified they wanted a hauler who could take all the materials – trash, mixed paper and recyclable containers. They currently have three dumpsters at every school – one trash dumpster, one mixed paper dumpster (which includes cardboard) and one mixed recyclable container dumpster.

- **Highlights:** Since HCS included recycling services in their competitive bid process, they got more services than they did in previous years for about the same price! Haulers priced bids competitively to ensure the award of the contract. Furthermore, HCS used grant funding to purchase used recycling containers from a nearby university, so recycling bins and carts were ¼ of the new price.
- **Estimated Annual Recovery: 323,000 pounds**

## Madison County Schools

- **Number of Schools:** 6
- **Number of Students:** 2,500
- **Solid Waste and Recycling Provider:** GDS (waste) and Madison County Solid Waste (recycling)
- **Annual budget for program:** County services program, no separate school budget.
- **Brief Description of the Program:** The County Solid Waste Department provided the schools with cardboard trailers and 95 gallon mixed paper containers (except their two smallest schools who were provided with small buildings to put their cardboard in). They collect cardboard, mixed paper, drink bottles, aluminum cans, and the large steel cans used in the kitchen. The schools keep small containers in the classrooms which are then transferred to the larger containers, usually by maintenance staff. The County has two full-time drivers who collect materials from the schools as part of their regular routes.
- **Highlights:** Madison County Solid Waste offers a highly effective incentive program for school and public recycling. Their “Penny a Pound” program donates one penny for every pound of mixed paper and cardboard recovered in the school programs and public programs back to the schools. For six months’ worth of recycling, they donated \$3,000 to the school system. The community is highly supportive of recycling because they know a portion of their efforts will directly benefit the school system.
- **Estimated Annual Recovery: 85,000 pounds**



## Extra Credit: Occupational Course of Study Programs

Occupational Course of Study Programs are offered in most high schools across North Carolina. Schools with an OCS program provide students with developmental or learning disabilities a chance to compete in the job marketplace by simulating a real-world job experience. This program can be tailored effectively with a high school’s recycling program.

At North Buncombe High School, the OCS Coordinator operates a “Recycling Factory” that processes all the paper



from the school. The Recycling Factory creates jobs for students where they collect the school's recycling, separate the paper by the type of paper and sell the paper to a local recycling facility. Revenues from the sale of paper directly support the program.

This model could be adapted to other schools state-wide. When offered several times to choose another factory model, time and time again the students respond that they want to keep recycling!

## 7. Key Strategies for Success: What to Remember from this Handbook!

- **Start from the top.** Begin planning your program with upper-level administration so that the program has support from the key decision-makers. Be sure communications regarding the program come from that authority, down through the principals and on to teachers and staff.
- **Use good signage.** Minimize contamination and confusion by placing signs on or near bins. Use direct language like, "Recycle Mixed Paper Here." List the materials that are acceptable and examples of the materials that are not. Images of those materials work well too. See <http://www.p2pays.org/recycleguys/signs.asp> for signs to download.
- **Place bins near trash cans.** The easier the program is, the more participation and more volume will be collected. Give people as many chances to recycle as possible and make it convenient by placing recycling bins and trash cans side-by-side.
- **Get the right bins for the job.** Not every recycling bin is created equal. Get the bin that works well for the type of material you're collecting, the space in which you plan to put the bin and how it will be emptied.
- **Communicate often how the recycling program works and provide reminders.**
- **Provide educational resources for teachers and students.** (lesson plans, field trips, workshops, etc)
- **Keep teachers, students and parents informed of your program's success.**
- **Minimize the financial burden of the program.**

## 8. Important Internet Links

- [www.p2pays.org](http://www.p2pays.org) – NC Division of Pollution Prevention and Environmental Assistance (a Division of the NC Department of Environment and Natural Resources) for data and information on solid waste and recycling in North Carolina.
- [www.recycle-guys.org](http://www.recycle-guys.org) – lots of kid and teacher-friendly material, including a special kids' page and links for teachers to lesson plans and other resources.
- [www.epa.gov/kids](http://www.epa.gov/kids) - similar to the Recycle Guys with activities, games and more for kids.
- [www.epa.gov/teachers](http://www.epa.gov/teachers) - has plenty of resources for teachers.
- [www.kab.org/kids](http://www.kab.org/kids) - interactive website with fun activities for kids.