United States Environmental Protection Agency
Region 4

# Recycling: A Component of Strong Community Development

Strong community recycling programs can contribute to a healthy, united community. Some of the many benefits of recycling are the prevention of greenhouse gases and supporting local economies by creating jobs and tax revenue. Recycling programs can also help to improve water and air quality and are building blocks for sustainable growing communities. Take a look at how recycling can impact your community with tangible improvements to your quality of life.

## Fostering Healthy Neighborhoods

How does recycling promote a healthy community? As manufacturing activities and jobs continue to be outsourced, communities are struggling to add new, high-paying jobs to boost their local economies. To tackle this problem, some local governments are shifting their focus to developing creative economies in hopes that they will attract alternative, sustainable industries to the area.

One key indicator of a creative economy is recycling. A community's commitment to a cleaner environment often reflects its commitment to a higher quality of living. Strong local and regional recycling programs also attract companies that reprocess recyclables and the suppliers who reuse these materials in their products. As EPA's *Recycling Economic Information Study* indicates, recycling industries not only offer higher paying jobs than the national average, but they also prevent communities from disposing of valuable commodities in landfills.[1]

**Fact:** The Curbside Value Partnership estimates that more than $1.2 billion worth of recyclables were disposed as waste in Region 4 states in 2006. Non-recycled fiber (e.g., paper, cardboard) contributed the most to this lost value, with nearly 1 billion pounds landfilled or incinerated.[2]

### Smart Growth Strategy: Recycling at the Center

Cities like Atlanta, GA are turning to smart growth strategies to manage expected population growth. Smart growth strategies are based on principles of sustainability—higher density mixed-use developments, remediation and reuse of Brownfields sites, integration of transportation investments with appropriate land use, and green building. ***At the core of green building is sustainability and in turn, recycling***. Green buildings require the use of products made of recycled content (e.g., insulation, carpet, pavers) and also make use of salvageable materials (e.g., doors, windows, lumber) from demolition. Green developments, such as Atlantic Station, the nation's first LEED™ Silver-Core & Shell high-rise office building in the world, cater to a "creative class" of people with a live, work, and play environment all in one place. The community was designed to improve the area's water resources and regional air quality and to serve as a model for environmental sustainability and smart growth. Recycling is always available at green developments, thus closing the sustainability loop and bringing further economic value to a successful development concept.

WHAT CAN YOU SAVE TODAY?
RESOURCE CONSERVATION CHALLENGE

According to North Carolina's *Recycling Means Business*, recycling employs more people than the state's bio-tech industry and the agricultural livestock industry. In addition, recycling jobs have increased 40 percent in ten years, as a percentage of the state's total employment.[3]

And what about air quality? Recycling also plays a role in reducing greenhouse gas emissions, which are associated with chronic health issues such as asthma. According to the Centers for Disease Control and Prevention (CDC), both indoor and outdoor air pollution pose hazards to human health and are estimated to be responsible for nearly 5 percent of the global burden of disease. Nearly 2 million children younger than five years of age die every year from acute respiratory infections. Efforts can be made to reduce environmental pollutants that may contribute to chronic illnesses through recycling programs that reduce energy consumption. By recycling, waste that releases greenhouse gases through anaerobic decomposition is reduced. Recycling also reduces the need for raw materials in manufacturing processes, which require larger amounts of energy to harvest and thus have a larger adverse air quality impact. According to RE3.org, paper recycling reduces air pollution by up to 74 percent when compared to producing paper from raw materials.[4]

Finally, landfilling can be minimized by implementing recycling programs and dedicating time and resources to their development and success. The placement of proposed landfills often leads to strong opposition in the community. The attitude of "not in my backyard" typically prevails. Landfill placement can lead to diminished property values and the potential for releases to the environment. The need for landfills and the concerns that come with them subside with higher recycling participation rates.

**FACT:** The White House Task Force projected that 195 million cubic yards of materials were prevented from entering landfills in 2005 due to recycling, an amount equivalent to the space of 92 large landfills.[5]

**Washington County, Kentucky: Taking a Regional Approach to Recycling**

Farming is a way of life in Washington County and with rising fuel costs and concerns about climate change and its effects on their community, recycling has captured the attention of local officials. ***The county started recycling with just one trailer and one employee in 2002***. Since then, the program has expanded with curbside service to its main city, Springfield. Washington County has also collaborated with neighboring counties to take a regional approach to collecting recyclables. Approaching recycling regionally has allowed six counties to participate in recycling, providing recycling opportunities to rural areas that otherwise would not receive service. Washington County received over $252,000 in grant money from the State of Kentucky to expand their recycling initiatives through the six-county region in 2007. ***The county program has grown from recycling approximately 325 thousand pounds and making $2,464 in profit in 2004 to making more than $10,000 and recycling over 1.3 million pounds of materials in 2006***. Using the grant money received in 2008 and partnerships with five counties, Washington County has collected over one million pounds of recycled materials in the first six months of 2008. Washington County was the first Certified Clean County in Kentucky and also the first county to receive grant funds for its regional approach to recycling. Recycling is adding economic value to the community and providing an opportunity for residents to tackle environmental concerns on a local level.

*Source: Washington County, KY*

## Fostering Sustainable Growing Communities

Making waste reduction a priority provides new opportunities for sustainable community growth.

**From Trash to Commodities**: Developing advanced recycling programs creates pathways for collected commodities to be sold in the marketplace. Comprehensive and efficient recycling programs offer more opportunities for the community to benefit financially, while improving the aesthetic appeal of their neighborhoods. One way the recycling industry does this is through boosting tax revenues—revenues that can go back into community projects such as public parks, alternative transportation, and educational grants.

**Fact:** The Florida Recycling Economic Information Study, completed in 2000, revealed that Florida netted $62 million in state tax revenues as a direct effect of the recycling and reuse industry. The study also showed that

recycling and reuse in Florida employs five times the number of people employed in convenience stores and has a total payroll that is ten times larger.[6]

In 2007, the city of ***Kinston, North Carolina*** was able to save $100,000 dollars in fuel and labor costs by implementing a new and improved recycling program. The city transitioned from 18-gallon containers to 95-gallon wheeled carts and implemented automated collection. Not only did the carts create added convenience for residents, the program coordinators saw a boost in participation as well.

**Dynamic Jobs**: Strong recycling programs have the ability to create jobs. While trash disposal simply transfers waste to its grave, recycling gives new life to salvageable materials, thus creating opportunities for new jobs. The more times a recyclable material is used before disposal, the greater the number of jobs that can be created. Recycling jobs represent a wide range of salaries. These jobs also span several industries and involve numerous skill sets, such as marketing commodities, sorting materials, and handcrafting furniture.

**Fact:** According to the 2006 report, *The Economic Impact of the Recycling Industry in South Carolina*[7], every 1,000 tons recycled from landfills represents, on average, 1.68 additional jobs in the state. This number also represents a total economic impact of $236,000 or the generation of $79,800 in personal income. Every additional 1,000 tons recycled generates $3,687 in additional tax revenues to the state.

**Rooms to Go Reaps the Benefits of Recycling**

Rooms to Go (RTG) is a leader in recycling, demonstrating that recycling can be quite lucrative. In 1992, Rooms to Go began collecting and recycling cardboard, expanding by 2005 to also recycle plastic and foam. Currently, Rooms to Go recycles 87% of plastic, 80% of wood, 96% of cardboard, and 96% of foam. As a result, over the last 15 years, RTG has "saved" 96,000 tons of solid waste from ever hitting a landfill, and currently recycles 85% of their waste stream. But the successes do not end there. In addition to the environmental benefits Rooms to Go has accomplished, they have some impressive economic successes. ***In 2000, the company grossed over $100,000 in cardboard income, and in the first year after the complete recycling system was implemented (2006), Rooms to Go realized a gross income of over $1,000,000.*** A culture of recycling pervades the company, due in no small part to the generous bonuses available for the conscientious worker. Recycling line workers can earn as much as a $50/week bonus for achieving a 75% recycling rate.

*Source: www.roomstogo.com*

**Supporting Sustainable Industries**: Recycling industries have been around for decades, with new companies emerging yearly. The needs in the industry are diverse. Some corporations rely on recycled plastics to produce their carpet products, while others depend on donated computers for refurbishing. Some companies are using recycled plastic in the production of their fleece products. The bottom line is that recycling facilities are bound to be established where supplies are plenty. According to EPA's *Markets for Aluminum*, consumers tend to buy scrap aluminum in the region where their plants are located. For instance, a secondary smelter will generally limit its scrap purchases to a radius of 500 miles.[8]

**Fact:** Coca-Cola announced that it will be spending $60 million to open a 30-acre plastic recycling plant in Spartanburg, SC. The plant will be in full operation in 2009 and is expected to recycle about 100 million pounds of polyethylene terephthalate (PET) plastic annually, which is equivalent to about 2 billion 20-ounce beverage bottles.

**Improved Water Quality a By-Product of Recycling**

Recycling can reduce a range of pollutants from entering the rivers, streams, and other waters of our state by reducing discharges to the environment. Recycling a ton of paper saves as much as 7,000 gallons of water and eliminates the wastes that would typically be generated during manufacturing.

Mississippi State Task Force on Recycling, 2006

### Myth: Recycled Bottles Just Go into New Bottles

Recycled materials are reprocessed and turned into a variety of new products. Recycled plastics are used in the production of toothbrushes, plastic construction timber, and carpets, to name a few. Recycling allows for greater innovation when it comes to the manufacturing of new products.

For example, the ***Catawba County EcoComplex in North Carolina*** puts the concept of "bio-mimicry" industrial development into practice. The complex generates power from landfill methane and houses a pallet company with master plans to have an integrated park where each industrial by-product is used by another company or the office park itself. Recycling can be more than simply reusing one material over and over for the same purpose. Recycling can also mean using waste products for fuel, such as scrap tire rubber or leftover wood chips. ***By-product synergy allows the EcoComplex to achieve cost savings by using waste products for energy and as components in new products***. It also protects the community by preventing the release of unnecessary greenhouse gases through transportation and development of materials from virgin resources. Efforts to develop recycling communities like the EcoComplex often require partnerships between local government and private industry. The result is a closed loop facility that turns what would otherwise be waste into valuable feedstocks.

### Myth: Recycling Just Becomes Trash

While it is true that contamination can render some materials unfit for recycling (such as food residue on paper products), ***recycling corporations work hard to find markets for materials that are recycled***. For example, SP Recycling in Georgia compiles lower value materials, such as rigid plastics, into piles that can be sold to plastic manufacturers. The company also tries to salvage as much scrap glass as possible to be reused and sold to glass manufacturers for lower grade applications. With new technology to separate and salvage materials and emerging markets for these materials, recyclers often find it feasible to partner with their end users to identify opportunities for reuse. Some materials will eventually find their way to the landfill or incinerator simply because they should not have been recycled in the first place. Educating consumers about what can and cannot be recycled will help in reducing the amount of materials that eventually must be disposed as waste.

### Myth: Recycling Lacks Growth

Recycling had a strong growth spurt in the early 90s but that doesn't mean it is a thing of the past. Recycling has created both local markets and international markets (think China). It is a growing part of our economy adding jobs and expanding tax revenues. A report from North Carolina *Made in North Carolina: Recycled-Content Products Help Fuel the State's Economy*, notes that between 1994 and 2004, recycling jobs have increased from 8,700 to 14,000. In contrast, manufacturing jobs in the state have declined from 817,300 to 577,400 during the same 10-year period.

### Myth: Recycling Is Hard

As long as the community is able to provide adequate recycling opportunities and accessibility, recycling should not be difficult for the consumer. America's Beverage Association's ***Recycle It Now*** program believes that recycling success can be as simple as just reminding people to do it. As part of their campaign, they provide large plastic recycling containers in the form of a plastic soda bottle *(see inset)* to encourage recycling, and to also make it easily accessible. Providing visuals in the community will help residents know what can be recycled.

*Photo at Right: Recycling containers such as this one are available through the* ***Recycle It Now*** *program.*

## Recycling Brings a Community Together

After the devastation of Hurricane Katrina, Harrison County, Mississippi started out on the long road towards recovery. Committed to rebuilding an even stronger community, Harrison identified recycling as a top priority for this severely damaged community's rebirth. Immediately following the hurricane, EPA arrived to aid the county in setting up a recycling center for white goods and other materials that could be salvaged from the disaster. According to Cindy Simmons of Harrison County, the process took nearly six months to complete.

Since the hurricane, Harrison has taken further steps to improve the county by restoring curbside recycling and implementing a household hazardous waste drive each year. The *Phone Book Recycling Campaign* was created as a way to bring the community together. To encourage school participation, schools were rewarded with funds for each phone book donated. The county continues to rebuild and is looking for opportunities to further improve their electronic waste recycling program. They have proven that recycling is an important component of a healthy and united community.

## Support Recycling and Invest in Your Community: "Take it to the Curb!" (Orlando, FL) – From Curbside Value Partnership

On a sunny day in May 2004, Orlando Mayor Buddy Dyer held a press conference on the steps of City Hall to kick off a new education campaign called *Take it to the Curb!* At the event the mayor encouraged Orlando residents to increase recycling by 10 percent. To accomplish this, he urged residents without bins to contact the city to get one. To help promote the new campaign, city officials created rolling billboards by covering their existing fleet of recycling trucks with new campaign-themed messages. The mayor also participated in a "ride-along" following the press conference where he hung door-hangers and talked to area residents about their needs. After the launch and subsequent city-wide communications campaign, bin requests increased 1,000 percent over the prior year.[2]

### More EPA Region 4 Resources

EPA has developed the Region 4 ***Municipal Government Toolkit*** (MGTK) to help state and local leaders initiate and improve community recycling programs. Several other fact sheets and resources are available online. Community improvements are just one positive aspect of adopting efficient recycling programs. Recycling also plays a role in addressing climate change through reducing energy and greenhouse gas emissions. In addition to the environmental benefits of recycling, communities can save money and boost their local economy through greater participation in recycling programs. To learn more about how your community can reap the benefits of recycling, check out the MGTK online at:

**http://www.epa.gov/region4/recycle**

Follow the link to the Toolkit

RECYCLING GROWS GREEN

**Check out other EPA fact sheets from the Toolkit:**

Source Reduction and Recycling: A Role in Preventing Global Climate Change

The Economics of Recycling in the Southeast: Understanding the Whole Picture

[1] EPA U.S. Recycling Economic Information Study, 2001, http://www.epa.gov/jtr/econ/rei-rw/rei-rw.htm
[2] Curbside Value Partnership, http://www.recyclecurbside.org/
[3] North Carolina's *Recycling Means Business,* http://www.p2pays.org/ref/34/33912.pdf
[4] North Carolina's RE3.org, www.re3.org
[5] Office of Federal Environmental Executive, Task Force on Recycling, *Recycling…For the Future*, 1998, http://www.ofee.gov/wpr/future.pdf
[6] Florida Recycling Economic Impact Study http://www.epa.gov/jtr/econ/rei-rw/pdf/fl_report.pdf
[7] S.C. Department of Commerce, *Economic Impact of Recycling Study in South Carolina*, 2006
[8] EPA *Markets for Recovered Aluminum,* 1993, http://www.epa.gov/garbage/pubs/sw90077a.pdf