



Raising Public Commitment to Your Local Recycling Program Communicating the Reason to Recycle

FACT SHEET

WHY INCREASE PARTICIPATION IN YOUR RECYCLING PROGRAM?

Your community has been running a recycling program for years – it seems to be working pretty well. You collect the basic stuff and about half the folks in your community use the service. It's time to ask yourself: is that really good enough?

What is at stake in a community's recycling program? What is the cost of a low public commitment to recycling, and what are the benefits of doing better? In short, why should communities care about getting more people to recycle more materials?

When widespread recycling efforts began 15 years ago, communities found it easy to explain the benefits to the public. Images of garbage barges, headlines about landfills filling up, and the “not in my backyard” phenomena all combined to galvanize public attention. With the help of a growing environmental awareness, the “disposal crisis” sparked a dramatic social movement that resulted in a permanent behavior change for about half of North Carolina's households.

Now the reasons to recycle - and the reasons to cultivate high recycling participation - have only increased in importance. What new “arguments” can help improve the recycling performance of the public and the programs that serve them? Below are some ideas to help take the public recycling conscience to the next level:

- Local Government's Return on Investment
 - In implementing recycling programs, local governments are making an investment on behalf of their citizens in a public service that has economic and environmental benefits for society. If only half of the served households participate, the local government's investment fails to deliver the highest possible “dividends.”
 - Local governments that make a small “co-investment” in programs to motivate households to recycle are maximizing their return on investment. They are also making sure that citizens are getting what they pay for through their taxes and fees.
- The Economy
 - Public recycling programs rely on “markets,” which are essentially large networks of private companies that help collect, process and use recovered materials to make new products. Both the U.S. and the global economy have become increasingly dependent on recycled or “secondary” resources. Many industries rely heavily on secondary resources to make their products, including the paper and steel industries, and aluminum, glass and plastic manufacturers.
 - Major industrial sectors would suffer severely if the supply of recycled materials suddenly disappeared. In fact, they are counting on those supplies to expand. Future world and U.S. domestic economic growth will increasingly rely on the recovery of secondary resources, especially as virgin materials become scarcer and as the cost of energy rises.

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- As the dependence on recovered materials has grown, the network of recycling businesses has expanded dramatically. The effects can be seen right here in North Carolina. The state's 1994 edition of the *Directory of Markets for Recyclable Materials* listed 306 companies; in 2004 that number was up to 532, for a 74 percent rise in only 10 years.
 - The advent of new recycling businesses and their continued growth has translated into major job creation for North Carolina. A 1994 study found that recycling employed more than 8,700 people across the state. A similar study in 2004 documented more than 14,000 employed in recycling, an increase of 60 percent in one decade. If we assume a low average wage of \$25,000/year for these workers, recycling creates a \$325 million payroll for North Carolina each year, which is plowed back into the economy through consumer purchasing, home-buying, savings in local banks, and paying of property and income taxes.
 - All over the state, people are employed, pay taxes, spend money and invest in their communities thanks to the recovery of materials from the waste stream. Low participation in community recycling programs directly affects the ability of North Carolina's recycling companies to survive and thrive. Using factors derived from the 1994 jobs study, a 20 percent increase in recycling would create as much as 500 new jobs. So not only is greater recycling participation good for local government efficiency, it's also good for the state's economy.
- Disposal Over the Long Term
 - Sensible waste management requires an integrated approach that recognizes both the need to reduce and recycle, and the inescapable need for environmentally protective disposal options. North Carolina took a major step forward in raising the environmental standards of disposal in 1998 by converting all landfills to lined facilities. This transition, along with the higher investment costs of disposal, precipitated the closure of most small local landfills and the opening of larger facilities, many owned by private companies. From 130 operational landfills in the 1990s, the number of landfills fell to 41 by 2004.
 - As part of the *2004 State Annual Report*, the N.C. Division of Waste Management conducted its first-ever projection of statewide disposal capacity. The total estimate of only 18 years of remaining landfill space gave the state a new ability to look ahead to capacity needs. Landfills in North Carolina have become more difficult to site – it is not uncommon for the entire process to take 10 years or more, and many proposed facilities have been stopped by local citizen opposition.
 - The increasing difficulty of the siting process is complicated by urbanization of many parts of the state. Urban communities with landfills – such as Wake and Mecklenburg counties, Winston-Salem, High Point, and Fayetteville – are likely operating the last facility in their jurisdiction. Within 30 years, they will be relying on landfills in rural areas (taking on the additional costs of transfer).
 - This long-term landfill trend is happening at the same time the state's disposed waste stream is rising. At the rate of growth experienced in the past decade, North Carolina could be disposing of close to 15 million tons of waste per year by 2024. In the time it would take for a child born in 2004 to graduate from college, North Carolina will need as much as 425,000,000 cubic yards of disposal space, an area about the size of Umstead State Park in central North Carolina forty-five feet deep.
 - Landfill technology has improved dramatically and promises greater protection of groundwater than ever before. Thus the immediate environmental effects of landfills are now better managed. Longer-term effects, however, are difficult to predict - although newer landfill technologies have considerably reduced risks, possible environmental harm remains. Landfills also remove land from other productive uses – such as growing trees or crops, or developing homes and businesses. Negative economic effects of landfills aren't usually counted in calculating a “tipping fee” – loss of land productivity and the related tax base.

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- Diverting more recyclables from waste helps control the risk and lessen the overall need for disposal capacity. A 2003 estimate by DPPEA projected at least 368,000 tons of readily recoverable traditional recyclables were thrown away in the residential waste stream alone. Recycling these materials would reduce the need for landfill disposal space by almost 650,000 cubic yards per year. How do we capture these materials? In large part, by getting more people to recycle, enhancing the programs that are already available to them.
 - North Carolina communities can help avoid the next disposal crisis, and control the long-term costs of disposal by investing in recycling education programs, and helping the public understand the long-term impacts of landfills.
 - Environmental Consequences
 - Recycling has always been “sold” on the basis of its environmental benefits. The well-documented and much-used “factoids” about these benefits still tell us that recycling is one of the most powerful everyday actions people can take to protect the environment. Some of the more well-recognized benefits include:
 - Energy Savings, for example:
 - Recycling an aluminum can saves 95 percent of the energy required to make the same amount of aluminum from virgin materials.
 - Producing new plastic from recycled material uses only two-thirds of the energy required to manufacture it from raw materials.
 - Producing glass from virgin materials requires 30 percent more energy than producing it from crushed, used glass.
 - Producing recycled paper requires about 60 percent of the energy used to make paper from virgin wood pulp.
 - Resource savings, for example:
 - One ton of uncoated virgin (non-recycled) printing and office paper uses 24 trees.
 - Every ton of steel recycled saves 2,500 pounds of iron ore, 1,400 pounds of coal and 120 pounds of limestone.
 - Prevention of emissions and pollution, for example:
 - Producing recycled paper causes 74 percent less air pollution and 35 percent less water pollution than producing virgin paper.
 - The pollutants created in producing one ton of aluminum include 3,290 pounds of red mud, 2,900 pounds of carbon dioxide (a greenhouse gas), 81 pounds of air pollutants and 789 pounds of solid wastes.
 - Recycling one ton of steel reduces air pollution by 86 percent and water pollution by 76 percent, and saves 74 percent of the energy and 40 percent of the water that would have otherwise been used.
 - The old “standard” environmental reasons to recycle can be supplemented by “new” arguments that have specific relevance to the quality of North Carolina’s environment. For example:
 - Climate change – the term “global warming” makes us think of the health of the whole planet, but the prospect of sea level rises and stronger hurricanes should make climate change an

important issue for all North Carolinians. Through its energy and resource savings effects, waste reduction is a demonstrated method of slowing the accumulation of greenhouse gases.

- Air quality – North Carolina’s major urban areas now regularly appear on the lists of the 20 metropolitan sites with the worst air quality in the country. As large areas of the state more frequently exceed air quality standards, there are growing concerns over health and economic impacts. In addition, visibility in the North Carolina mountains has worsened steadily, with possible impacts on tourism and other activities. Among the many strategies to improve air quality, recycling has a strong role to play. By capturing the tremendous energy savings from the use of recovered materials, recycling helps lower emissions of smog-forming gases. Removing organic materials like paper from the waste stream also reduces the generation of landfill methane, some of which is used beneficially in North Carolina, but much of which is vented and/or burned, contributing to local and global air quality concerns. Also, using more discarded paper to make new paper allows the trees left standing to do their job cleaning the air.
- Trees – Speaking of which..., recycling paper has long been touted as a saver of trees. Even if you’re not a tree hugger, you can see that the fewer we use for making paper leaves more for other, higher-value products, such as lumber. North Carolina has a direct stake in how many trees are used. According to a study conducted by Southern Center for Sustainable Forests (<http://www.env.duke.edu/scsf/>), an increasing amount of trees are lost to urbanization and more pressure is placed on the remaining forest resources. Capturing more paper from the waste stream helps meet the rising overall need for wood fiber, and leaves trees for other uses in our state.

North Carolina’s communities have more reasons than ever to increase the effectiveness of their recycling efforts. The three R’s have a corollary in the three “E’s” – efficiency, the economy, and the environment. With recycling programs already in place, communities are well poised to capture these benefits by increasing public participation.



The North Carolina Division of Pollution Prevention and Environmental Assistance provides free, non-regulatory technical assistance and education on methods to eliminate, reduce, or recycle wastes before they become pollutants or require disposal. Telephone DPPEA at (919) 715-6500 or (800) 763-0136 for assistance with issues in this fact sheet or any of your waste reduction concerns.

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