

Chapter Six: Actions to Meet Goal Two

Goal Two of this Plan states:

Substantially increase the amount of waste recycled and composted by 2013.

The objectives below are designed to increase waste diversion. Most objectives build on proven techniques and policies, although they may be applied to new initiatives. The objectives balance the need for scarce funds vs. the unpopularity and failure rate of “unfunded mandates.” The sources targeted to generate funds also provide a disincentive for less desirable waste management options¹ and selectively link higher life-cycle costs with the products that require them.

KEY ACTIONS TO MEET GOAL TWO

Objective 2.1. Enact a series of statewide disposal bans on recyclable materials like pallets, clean wood waste, oil filters, cardboard, newspaper, office paper and cathode ray tubes.

Diverting high volume, easily recognizable waste streams will attain Goal Two. North Carolina’s data show that selective disposal bans effectively divert waste on both state and local levels. Bans work best when diverted materials have adequate or growing markets, or a wide range of potential end-uses. Staggering enactment and enforcement dates increases success rates because it allows time for both infrastructure and educational program to be developed.

The following key actions contribute to this objective:

- Implement a disposal ban on pallets and clean untreated and non-glued wood waste by Jan. 1, 2007. Diversion potential is 500,000 to 650,000 tons per year.
- Implement a disposal ban on oil filters by Jan. 1, 2007. Annual diversion potential is 3,500 tons of filters and approximately 250,000 gallons of residual motor oil.
- Implement a disposal ban on cathode ray tubes by Jan. 1, 2008. Potential diversion is 17,600 tons per year.
- Implement a disposal ban on corrugated cardboard by Jan. 1, 2010. Potential diversion is 172,000 to 215,000 tons per year.
- Implement a disposal ban on newspaper by Jan. 1, 2010. Potential diversion is 40,000 to 55,000 tons per year.
- Implement a disposal ban on office paper by Jan. 1, 2010. Potential diversion is 43,000 to 53,000 tons per year.

Objective 2.2. Require local government programs to achieve per capita recovery targets.

Local recycling programs are widely established, but they also vary widely in effectiveness. Some local governments have not implemented programs and others run programs that perform poorly. A per capita recycling rate of 60 pounds is highly achievable. *Counties* divert 79 pounds per capita on average, but individual county rates range from 0.22 to 368.61 pounds. For *municipalities* with populations over 5,000 that offer recycling, the average recovery rate is 92 pounds per capita. However, with individual rates ranging from a low 0.33 pounds per capita to 362.07, opportunities for improvement are abundant.

¹ N.C. G.S. 130A-309.04(a).

To encourage equity between jurisdictions and increased diversion, the state should consider setting minimal diversion standards for local government recycling programs.

The following key actions contribute to this objective:

- Require municipalities over 5,000 in population to meet a 60 pounds per capita recycling rate by June 30, 2007. Based on FY 01-02 data, this would affect 54 municipalities:
 - 33 municipalities have recycling programs diverting less than 60 pounds per capita.
 - 7 municipalities need to add recycling programs.
 - 4 municipalities need to collect data on existing programs.
 - 10 municipalities need to clarify their role in another government's recycling program.
- Require counties over 20,000 in population to meet a 60 pounds per capita recycling rate by June 30, 2007. Based on FY 01-02 data, this would affect the 41 counties that did not meet 60 pounds per capita.
- Require counties under 20,000 in population to meet a 50 pounds per capita recycling rate by June 30, 2007. Based on FY 01-02 data, this would affect 10 counties that did not meet 50 pounds per capita.
- Raise the required rate of recycling by 5 pounds per capita every two years. For example, municipalities over 5,000 would be required to achieve 65 pounds per capita by June 30, 2009, and 70 pounds per capita by June 30, 2011.

When calculating recovery rates, local governments should only claim recycling tonnages that occur through their own operations, direct contracts or franchises. Local governments could use a number of approaches to meet the requirement. The target does not prescribe specific methods, policies, programs and expenditures, so local governments have maximum flexibility to choose the methods most appropriate for their area. If implemented, these key actions would increase recycling by approximately 45,000 to 55,000 tons in the *first year alone*. Additional diversion would occur as population and per capita requirements rise.

There may be alternatives to requiring a given outcome and leaving local governments free to choose their own methods. For example, Oregon requires local governments to implement a minimum set of prescribed local programs.

All key actions would be strengthened and encouraged if local governments receive funds to support them. Objective 2.3 details a way for funds to be directly tied to local government performance.

Objective 2.3. Enact a statewide surcharge on tipping fees.

Twenty-two states apply a statewide tipping fee or surcharge. The fees support local programs, state permitting functions, household hazardous waste programs, state recycling grants, market development, cleanup efforts and landfill closures. Fees range from \$.25/ton in Arizona to \$8.75/ton in West Virginia.

A statewide tipping fee would provide local governments with the funds needed to help them afford the high cost of long-term closed landfill management. The fee could also encourage higher recovery levels, prevent and control litter and illegal dumping, and improve the landfill permitting process. Here is one scenario of how the funds could be applied.

- \$2.50/ton automatic disbursement to local governments to achieve the per capita recovery goals described in Objective 2.2. This disbursement would make Objective 2.2 a funded mandate.
- \$2/ton for a long-term landfill cleanup.
- \$.05/ton to fund the state's solid waste permit program would reduce permit review time and increase compliance action.
- \$.15/ton for state recycling market and infrastructure development grants.
- \$.15/ton for litter and illegal dumping clean-up and abatement programs.
- \$.15/ton to research and implement pilot bioreactor landfill programs, initiate landfill gas-to-energy programs, and other efforts that reduce landfills' environmental impacts.

A statewide tip fee surcharge would fund needed programs and reduce the economic gap between landfill disposal and its alternatives. Surcharges typically motivate generators to divert more waste from disposal. The surcharge would be applied across the board to both private and public facilities.

Objective 2.4 Require private waste management companies to plan and report solid waste activities.

Local governments are required to write 10-year solid waste management plans and provide updates every three years. The plans set waste reduction goals and specify activities that achieve them. They also include collection and disposal service goals for local government jurisdictions.

Privately developed and operated transfer stations and landfills diminish local government's ability to control the flow of waste. This loss of control often prevents local governments from achieving their solid waste management and diversion goals. If private haulers operating transfer stations and landfills communicated their solid waste management plans, state and local governments would have more of the data they need to set and achieve their goals.

The following key actions contribute to this objective:

- By 2006, require private haulers operating transfer stations that ship waste to other counties or states to submit solid waste plans. The plans should discuss:
 - If the hauler intends to recycle materials handled at the transfer station, and
 - How the transfer station may impact the ability of the county it operates in to meet local solid waste goals.
- As an alternative, private haulers operating transfer stations that ship waste to other counties or states could integrate their planning efforts with those of the county where they are located.
- By 2006, require private landfills receiving waste from other counties to submit solid waste plans. The plans should discuss:
 - The landfill's intentions to recycle any materials handled at its facility, and
 - How the landfill affects the ability of the counties that generate the waste it receives to meet their locally adopted solid waste goals.
- As an alternative, private landfills could integrate their planning efforts with the counties from which they receive waste.

Objective 2.5 As an alternative to parts of Objective 2.1, Objectives 2.2 and 2.4 require all public and private household solid waste collection providers to offer separate services to collect common recyclables.

Wisconsin reached high recovery targets when it passed a mandatory recycling law that applied to a range of materials. North Carolina has both the need and the ability to recover higher levels of common recyclables like newspapers, bottles and cans. Many households statewide enjoy some sort of solid waste collection service but do not receive comparable recycling services. When communities mandate material separation, recovery rates rise almost immediately (e.g., Durham, N.C.). Requiring both public and private sector haulers to meet minimum performance standards would equitably increase diversion rates of recyclable materials.

The following key actions contribute to this objective:

- By 2006, require all collection service providers to offer separate recycling services for newspaper, magazines, high-grade paper, aluminum cans, steel cans, glass bottles, #1 and #2 plastic bottles.

Objective 2.6. Implement variable rate pricing and local mandates that increase recycling participation.

Variable pricing increases waste reduction program participation and establishes equitable and stable financing. Twenty-five North Carolina communities currently operate variable rate pricing programs. Because user fees are based on the amount of waste disposed, generators are financially motivated to reduce waste, recycle and compost.

Recycling mandates are an alternative method to increase participation in local waste reduction programs. Mandates vary greatly, but most require residents to separate certain materials from the waste stream. Mandated materials are typically commodities with historically stable market conditions (e.g., glass containers, newsprint, etc).

A number of states and North Carolina communities have successfully mandated recycling. Mandates increase participation and recovery, which increases programs' cost-effectiveness. The city of Durham is a prime example of a successful recycling mandate. Just six months after enforcement began, per capita recovery rates increased 27 percent and participation rates jumped from 60 to 80 percent. As with any successful mandate, Durham's program has an enforcement component.

If more communities used variable rate pricing or mandated local recycling, their programs would reduce more waste and be more cost-effective.

The following key actions contribute to this objective:

- Require municipalities over 15,000 in population to implement residential variable rate pricing programs or adopt mandatory residential recycling ordinances by 2010. Based on FY 01-02 data, this action would affect 50 municipalities.
- Require counties over 100,000 in population to implement variable rate pricing programs or adopt mandatory recycling ordinances by 2010. This action should be limited to county-controlled residential waste. Based on FY 01-02 data, 23 counties would be affected.
- Require municipalities over 5,000 in population to implement residential variable rate pricing programs or adopt mandatory residential recycling ordinances by 2012. Based on FY 01-02 data, this action would affect 64 municipalities.

- Require counties over 50,000 in population to implement variable rate pricing programs or adopt mandatory recycling ordinances by 2012. Action should be limited to county-controlled residential waste. Data from FY 01-02 show 27 counties would be affected.

Objective 2.7. Maintain and expand North Carolina’s participation in product stewardship initiatives.

Product stewardship is a growing movement to expand the responsibility of manufacturers and other parties to manage end-of-life products. The current model of using tax-funded government programs to recycle many waste streams has reached a plateau. It has been difficult to start recycling other discards, so the environmental impacts that these products pose continues with little intervention. Product stewardship’s goal is an alternative to tax-funded government programs. It uses a model of “shared responsibility” where manufacturers and retailers expand their role to finance, expand and improve recovery infrastructure.

DENR participates in the national effort to promote product stewardship. DENR is a formal member of the Product Stewardship Institute (PSI), and is helping to implement the Carpet America Recovery Effort. North Carolina is also helping to conduct a national beverage container product stewardship process. Through PSI, DENR participates in the National Electronics Product Stewardship Initiative. If this effort fails to produce an adequate infrastructure to divert electronic wastes, North Carolina should pursue Objective 2.8 below. DENR is also working with paint manufacturers through PSI to target old paint for recovery.

The following key actions contribute to this objective:

- Continue to participate in and support national, multi-state initiatives that implement product stewardship practices for as many products as possible.
- Promote existing private product stewardship programs – e.g., the national recycling services for rechargeable household batteries.
- Encourage local governments to participate in the PSI and in other product stewardship initiatives to increase the national number of jurisdictions supporting these efforts.
- Look for opportunities to introduce product stewardship principles into proposed recycling legislation.

Objective 2.8. Implement a consistent funding source to recover electronics.

Electronic waste is a fast-growing and problematic waste stream. Recovering electronic discards would help North Carolina reduce the volume and toxicity of materials disposed in landfills. If the National Electronic Product Stewardship Initiative fails to develop a national diversion infrastructure, North Carolina should establish a funded, statewide system to recover electronics.

The following key action would contribute to this objective:

- Implement a one percent advanced recycling fee (ARF) on each unit of electronics sold, such as computers and televisions. Like the white goods and tire programs, distribute most of the funds to support local government operations.

Objective 2.9. Increase public awareness and commitment to recycling.

North Carolina would benefit from increasing the current public recycling participation rate of 47 percent. A 20 percent boost would divert close to 74,000 additional tons of material through curbside and drop-off programs.

In 1999, North Carolina began using the highly effective “Recycle Guys” education campaign. The concept uses animated characters in television ads and other media. Funding partnerships were established with local governments and private entities to provide TV airtime and produce supporting materials. The campaign’s proven strong appeal could serve as a foundation to increase recycling participation.

The following key actions contribute to this objective:

- Commit at least \$50,000 per year from the Solid Waste Management Trust Fund to finance the Recycle Guys campaign.
- Seek annual matching funds from local government partners.
- Invite the private sector – particularly solid waste haulers and recycling companies – to join and financially support the campaign.
- Partner with the Department of Transportation and target Recycle Guys campaigns to support anti-litter efforts.
- Ask local governments to integrate the Recycle Guys with their current recycling educational campaigns.
- Provide local governments with the materials and supplies they need to support their educational and promotional on an as-needed basis.

Objective 2.10. Increase “buy recycled” efforts by state and local agencies and the private sector.

Recycled content products must be purchased to strengthen end-use markets for recyclable materials. North Carolina state agencies made great strides as they met most statutory requirements to buy recycled paper and other items. The falling price and proven quality of recycled paper, in addition to source reduction efforts, made it possible for the state to support recycling markets without significantly increasing its purchase budget. Despite tremendous progress, state government could increase its efforts and encourage local communities to begin or expand existing efforts.

The following key actions contribute to this objective:

- Eliminate the purchase of 100 percent virgin products wherever feasible and only offer recycled products in all the state term-product categories possible.
- Conduct outreach initiatives and explore local mandates and incentives to encourage local governments to add buy recycled programs to their local 10-year plans.
- Conduct outreach efforts to North Carolina businesses and industries to encourage them to purchase recycled products.

Objective 2.11. Increase the amount of organic materials diverted by state agencies.

If state and local governments divert organic materials through composting, they will significantly increase their ability to reach their waste reduction goals. Figure 2.5 in Chapter 2 showed a breakdown of North Carolina’s estimated waste stream, and the heavy presence of food wastes. A portion of this organic waste stream is generated at state agency facilities. On-site university and prison composting operations have proven to be effective, so the practice should be expanded. State agencies with large organic waste

streams from food service, landscaping and other activities (e.g., produce wastes from farmers markets) should divert materials to the growing network of composting operations and service vendors.

The following key actions contribute to this objective:

- Identify best management composting practices for state agencies. Provide technical assistance to plan, implement and sustain composting operations.
- Implement plans for on or off-site composting programs at state agencies with large organic waste streams.

Objective 2.12. Add recycling and composting to disaster debris management plans.

Disaster events have a tremendous impact on local and statewide waste management infrastructures. Requiring detailed plans to handle the waste generated by a disaster would help assure adequate disposal capacity, sensible debris staging, and divert a considerable amount of waste.

The following key actions contribute to this objective:

- Require local solid waste plans to detail how local communities will conduct disaster debris management programs.
- Identify best management practices and infrastructure preparation for disaster debris and educate others through outreach efforts.
- Develop a permanent diversion infrastructure to handle large and frequently occurring disaster-related debris (e.g. mobile homes).

Objective 2.13. Increase source reduction, recycling and composting grant and loan funds.

In one decade, administering Solid Waste Management Trust Fund grants yielded an extensive, permanent waste diversion infrastructure. The grants helped create and promote effective waste diversion techniques and technologies. The revolving loan fund established in 2000 has already proven to be an effective financial mechanism to stimulate recycling infrastructure.

Because the state's waste stream has grown along with the number of grant requests, the Trust Fund is unable to meet demand. Increasing the fund would increase the amount of waste diverted through reduction-related grants and loans. Using the fund to improve the state's waste diversion infrastructure would provide more efficient and cost-effective diversion.

The following key actions contribute to this objective:

- Pursue the statewide tip fee outlined in Objective 2.3.
- Add money to the Solid Waste Management Trust Fund for waste reduction and market development grants.
- Devote a percentage of any new Trust Fund monies to build capital in the Recycling Revolving Loan Fund administered by the Community Center for Self-Help.