



# Recycling-Based Waste Management Action Plan

for the Communities of Sullivan County, New Hampshire

## SUMMARY DOCUMENT

This “Recycling-Based Waste Management Action Plan” is designed to help Sullivan County residents realign waste-management priorities toward a recycling-based and resource conservation-based economy<sup>1</sup>.

Currently, Sullivan County towns recycle only 13 percent of their waste — far below the State of New Hampshire recycling goal of 40 percent and far below recycling levels achieved by numerous New Hampshire towns.

Further, Sullivan County residents pay among the highest tipping fees in New Hampshire and across the nation at \$91/ton, while tipping fees at some landfills in New Hampshire the region are less than half that amount. Combined with the relatively low median household income, Sullivan County residents pay a disproportionate share of their income for waste disposal.

Sullivan County residents can achieve a 50 percent recycling rate through a broad range of new programs designed to reduce both the volume and toxicity of waste through recycling, waste reduction, reuse, composting, proper management of household hazardous waste, and effective management of residuals.

This Action Plan is the culmination of efforts by dozens of local residents to move Sullivan County toward a more recycling-based economy. All decisions on waste management systems have been guided by a public Steering Committee under the framework of the Waste Action Collaborative of Sullivan County (WACSC). Towns included within the scope of this action plan are: Acworth, Charlestown, City of Claremont, Cornish, Croydon, Goshen, Grantham, Langdon, Lempster, Newport, Plainfield, Springfield, Sunapee, Unity, and Washington.

This Action Plan has been prepared by Antioch New England Institute (ANEI), the community outreach arm of Antioch University New England, with funding from the U.S. Department of Agriculture.

Sullivan County residents have enormous potential for shifting their waste management practices away from incineration and landfilling and toward waste reduction and recycling.



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# Where We Are Now

Sullivan County towns can reduce their current annual waste disposal bill by more than \$1,000,000 by increasing recycling levels to 50 percent

## Waste Generation, Diversion, and Composition

ANEI estimates that Sullivan County towns generated an estimated 30,972 tons of municipal solid waste in 2005. Of this amount, approximately 27,080 tons were discarded in either waste incinerators or landfills, while an estimated 3,892 tons were recycled. This means that Sullivan County towns recycled only an estimated 13 percent of their waste in 2005 – far below the year 2000 recycling goal of 40 percent set by New Hampshire State Legislature.

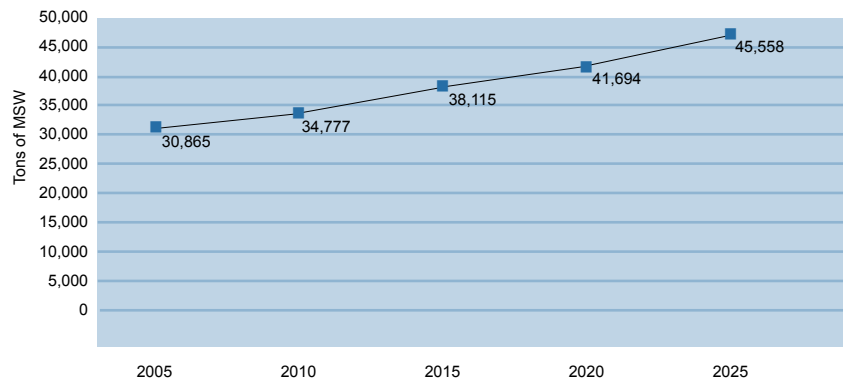
This recycling level is also far below the recycling levels achieved by several New Hampshire towns, including Peterborough at 78 percent, Troy at 54 percent, and Dublin at 49 percent.

Actually, several Sullivan County towns have achieved respectable recycling levels over 30 percent, including Unity, Washington, Sunapee, and Acworth. Low recycling levels in the population centers of Claremont and Newport, however, bring down the average recycling rate for the County.

Over the next 20 years, waste generation is expected to increase from the current 30,874 tons to a projected 45,513 tons in 2025 as Sullivan County's population and per capita waste generation are expected to increase (see Figure 1 below). Based upon current waste management programs, the vast majority of this waste will end up in landfills or incinerators if Sullivan County does not take aggressive action to implement recycling and other waste diversion programs.

According to a study conducted by the Pennsylvania Department of Environmental Protection, paper and organic materials such as food and yard waste compose more than 50 percent of the waste stream. Overall, ANEI estimates that close to two-thirds of this waste could potentially be recycled or composted, while the U.S. Environmental Protection Agency puts this figure closer to 75 percent.

**Figure 1**  
**Projections**  
**of Municipal**  
**Solid Waste for**  
**Sullivan County, NH**



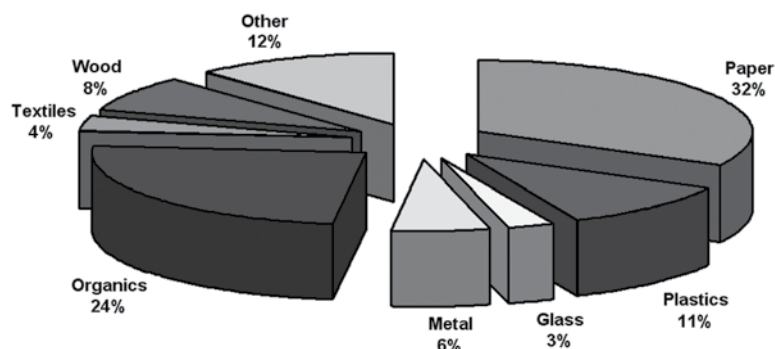


Figure 2

## Composition of Municipal Solid Waste (% by weight)

## Current Waste Management System

Overall, ANEI estimates that close to two-thirds of the municipal solid waste in Sullivan County could potentially be recycled or composted, while the U.S. Environmental Protection Agency puts this figure closer to 75 percent.

Twelve of fifteen municipalities in Sullivan County are part of the New Hampshire Vermont Solid Waste Project – a bi-state group of 29 towns that are under long-term contract to supply trash to the Wheelabrator Claremont waste incinerator. These towns are Acworth, Claremont, Cornish, Croydon, Goshen, Grantham, Landgon, Lempster, Newport, Plainfield, Sunapee, and Springfield.

The three remaining towns in Sullivan County make their own arrangements for waste disposal; Unity has its own landfill, while Washington and Charlestown send their waste to the landfill in Berlin, NH.

Sullivan County is a mixture of rural and urban communities. Residents and businesses have the option of disposing of their solid waste through drop-off facilities or through curbside collection. All Sullivan County residents have the

ability to self-haul their solid waste to a local waste transfer station and their recyclable materials at a local recycling center with a total of 12 transfer stations/recycling centers in the County. These transfer stations/recycling centers require individuals and businesses to transport their own waste to the facility. There is no clear information about what percentage of waste is collected at drop-off transfer stations versus curbside waste collection.

Most of the residents in smaller, rural communities take their solid waste to local transfer stations, while residents in the larger communities, such as Claremont and Newport, are served principally by private waste haulers. The Town of Plainfield has the only curbside recycling collection program in Sullivan County which is contracted through the town.



# Where We Need to Go

## Why Recycle?

Why shouldn't Sullivan County continue its current practices of disposing of an estimated 87 percent of its waste in incinerators and landfills? There are several compelling reasons for diverting waste from disposal through increased waste reduction, reuse, and recycling.

### Recycling:

**Saves money.** Households can save money by reusing materials and products and by practicing smart shopping habits that reduce waste.

**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.

**Reduces environmental problems that come from landfills and incinerators.** Landfills and waste incinerators contribute to air and water pollution.

**Saves energy and prevents pollution.** Tremendous energy savings come from using recycled instead of virgin materials in manufacturing. Almost all manufacturing processes use water and release wastewater and air emissions into the environment.

**Creates jobs.** Recycling is an increasingly important part of our economy. For example, one Massachusetts study estimated that more than three percent of the Massachusetts workforce worked in recycling related fields.

## Toward Zero Waste

The Action Plan is based upon the concept of "Zero Waste" wherein all waste is viewed as a potential resource and that efficient use of our natural resources is the direction we should be headed. It requires that we maximize our existing recycling and reuse efforts, while ensuring that products are designed for the environment and have the potential to be repaired, reused, or recycled. The success of Zero Waste requires that we redefine the concept of "waste" in our society. In the past, waste was considered a natural by-product of our culture. Now, more and more people are recognizing that proper resource management, not waste management, is at the heart of reducing waste sent to landfills.

In December 2005, the Steering Committee for the Waste Action Collaborative of Sullivan County (WACSC) adopted a resolution that Sullivan County should move toward achieving 50 percent recycling within five years or sooner.

In 2005, Sullivan County residents could have reduced their disposal bills by more than \$1,000,000 if they had achieved a 50 percent recycling rate—a reduction of an additional 11,650 tons of waste. Shifting from a waste-oriented economy to a recycling-oriented economy will require significant changes in personal behavior, investments in appropriate infrastructure, and large-scale public awareness and education programs.

The proposed recycling and waste management system described herein is based upon the waste management hierarchy of waste reduction, reuse, and recycling as the highest priorities.

ANEI conducted an economic analysis of alternative systems to determine the most cost-effective approaches to achieving the 50 percent recycling goal. The recycling analysis identifies how much of each waste material could be diverted from disposal, and includes a set of programs for managing various wastes.



## What is Zero Waste?

- Aims to eliminate rather than “manage” waste.
- Is a whole system approach that aims for a massive change in the way materials flow through society – resulting in no waste.
- Is both an end of pipe solution which encourages waste diversion through recycling and resource recovery, and a guiding design philosophy for eliminating waste at source and at all points down the supply chain.
- Offers new tools and new ways of thinking so that normal, everyday activities contribute to the answer rather than the problem.
- Redesigns the current, one-way industrial system into a circular system modeled on nature’s successful strategies.
- Helps communities achieve a local economy that operates efficiently, sustains good jobs, and provides a measure of self-sufficiency.
- Maximizes recycling, minimizes waste, reduces consumption, and ensures that products are made to be reused, repaired or recycled back into nature or the marketplace.
- Is a powerful concept that enables us to challenge old ways of thinking and inspires new attitudes and behavior.

## Proposed Waste Management System

The Action Plan proposes the following new programs and facilities for Sullivan County:

### Waste reduction

- Undertake an extensive public education and outreach program to educate residents and businesses on how to reduce waste at the source and to expand opportunities for reuse.

### Recyclable materials

- Maintain the existing network of transfer stations and recycling centers in Sullivan County.
- Institute curbside recycling in areas that are currently served by curbside waste collection, particularly Claremont, Newport, and Charlestown.
- Construct a new, centrally located materials recovery facility (MRF) in the County.

### Organic materials

- Provide incentives and technical support for backyard composting.
- Construct a new aerated windrow composting facility to compost yard and food waste.
- Initiate pilot curbside food waste collection programs for restaurants and schools in Claremont and Newport.
- Provide seasonal curbside collection of yard wastes.

### Construction and demolition debris

- Promote onsite source separation programs for new construction and renovations.
- Promote deconstruction programs for building demolition.
- Support the establishment of a new business or non-profit organization to sell reused building materials.

### Household hazardous waste and universal wastes

- Promote widespread public education programs to encourage alternatives and proper disposal.
- Establish a new permanent household hazardous waste (HHW) facility and a roving vehicle to serve the outlying/rural areas.

### Residual material

- Construct a new centralized transfer facility with the ability to consolidate waste materials for long-haul, out-of-county disposal.
- Contract with an out-of-county disposal facility to accept residual materials from Sullivan County towns.

# How We Can Get There

## Policy Recommendations

Sullivan County residents can achieve a 50 percent recycling rate through a broad range of new programs designed to reduce both the volume and toxicity of waste through recycling, waste reduction, reuse, composting, proper management of household hazardous waste, and effective management of residuals.

Sullivan County towns will need to implement a range of policy initiatives, make investments, and stimulate behavioral change among its citizens to achieve a 50 percent recycling rate within the next five years. ANEI proposes the following recommendations to move Sullivan County down this path, as detailed below.

**Local governments should declare waste reduction and recycling as waste management priorities.** Both the general public and the private sector need to know that local government officials are serious in their intent and commitment to making a recycling a reality in Sullivan County.

**Make recycling convenient by instituting curbside recycling collection.** Studies nationwide have shown that convenience is one of the most important factors in getting people to recycle. Sullivan County towns can significantly increase recycling by ensuring that all residents that are currently served by curbside waste collection also receive curbside collection of recyclable materials.

**Provide economic incentives for residents and businesses to recycle.** Most residents in Sullivan County have very little incentive to recycle or reduce their waste because their disposal costs are paid through property taxes or as a flat fee. Communities throughout New Hampshire and the U.S. have found that a “pay-as-you-throw (PAYT)” program provides customers with powerful, equitable incentives to reduce their waste, e.g., the less you generate, the less you pay.

**Develop the necessary infrastructure.** Sullivan County needs new infrastructure if it is going to increase recycling. These facilities include a new MRF, windrow composting facility, HHW collection facility, transfer station for consolidating waste, and a reused building supply center.

**Undertake wide scale public education efforts.** Public education is the underpinning of any successful recycling program. These educational efforts should be diverse, widespread, and ongoing.

**Eliminate economic disincentives:** Towns should not be financially penalized for reducing their waste through recycling. Any new waste disposal contracts should not contain guaranteed annual tonnage (GAT) provisions.

**Work in partnership with the private sector.** It is likely that the private sector will play a significant role in a new recycled-based waste management system. Local governments should work closely with the private sector to share their vision on waste management for the county and how the private sector can play a role in achieving that vision.

**Consider job creation impacts of recycling.** On a per-ton basis, sorting and processing recyclables alone sustain ten times more jobs than land-filling or incineration. Towns should consider the job creation impacts of recycling and waste reduction efforts when implementing a new recycling-based waste management system.





# Conclusion

## Explore range of options to pay for the system.

While recycling can save businesses and residences money, it also costs money. In terms of capital requirements for any new facilities, such as the MRF, towns will need to evaluate a range of options for raising capital, including bonding, state appropriations, and private sector financing.

## Establish new organizational structure for addressing solid waste.

ANEI firmly believes that a new organizational structure is needed for addressing solid waste issues on a regional basis within Sullivan County, especially given the history of the Sullivan County Regional Refuse Disposal District. Sullivan County towns can benefit by coordinating their efforts to achieve economies of scale and realize cost-effective options for managing waste.

## Consider issue of flow control and associated risks for municipal investments in solid waste.

Any new infrastructure investments, such as a new MRF, could potentially be operating in a market economy wherein private haulers would be free to decide where they are going to take their materials. Any proposal to publicly-fund a new recycling facility should take this risk into consideration.

This Recycling-Based Waste Management Action Plan has been prepared to lay the foundation for building long-term sustainability for waste reduction and recycling programs in Sullivan County. With this Action Plan as a starting point, ANEI is hopeful that Sullivan County can be a model of how to transition from waste management practices that emphasize disposal/incineration to one that emphasizes reducing both the volume and toxicity of waste.

## Footnotes

1 For a full copy of the "Recycling-Based Waste Management Action Plan for the Communities of Sullivan County," contact Antioch New England Institute at 603-283-2105 or email at [ellen\\_keech@antiochne.edu](mailto:ellen_keech@antiochne.edu).

2 "Recycling and Waste Generation Tonnages," August 2006. New Hampshire Department of Environmental Services, Concord, NH. [www.des.state.nh.us](http://www.des.state.nh.us).

3 Based upon an estimated annual increase in population of 1.2%. From projections provided by New Hampshire Office of Energy and Planning [www.nh.gov/oep/programs/Data-Center/Population/PopulationProjections](http://www.nh.gov/oep/programs/Data-Center/Population/PopulationProjections). Also, assumes increase in per capita waste generation of 1% annually.

4 Composition of Municipal Solid Waste, April 2003. Pennsylvania Department of Environmental Protection, Harrisburg, PA.

5 Other includes textiles, unpainted wood, painted wood, carpet, drywall, other construction and demolition debris, electronics, household hazardous waste, and other waste.

6 N.C. Division of Pollution Prevention and Environmental Assistance (DPPEA), <http://www.owr.ehnr.state.nc.us/recycleguys/why.asp>

7 "Fact Sheet, "The Massachusetts Recycling Economy." Massachusetts Department of Environmental Protection

8 Excerpted from The End of Waste: Zero Waste by 2020; Zero Waste New Zealand Trust. [www.zerowaste.co.nz](http://www.zerowaste.co.nz)



## About

### Antioch New England Institute

Antioch New England Institute (ANEI) is a nonprofit consulting and community outreach arm of Antioch University New England. ANEI promotes a vibrant and sustainable environment, economy, and society by encouraging informed civic engagement.

Antioch University New England (ANE) is one of five campuses of Antioch University. Established in 1964, ANE is an innovative institution offering scholarly, practice-oriented graduate study in environmental studies, organization and management, education, and applied and clinical psychology.

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