

# BIOCYCLE

JOURNAL OF COMPOSTING & ORGANICS RECYCLING

JANUARY 2005



## RECYCLING PIONEER VENTURES INTO FOOD COMPOSTING

Colorado's Eco-Cycle, founded in 1976, believes that to fulfill its mission of maximizing landfill diversion, "we need to start composting."



**HOW TO PRESERVE YOUR COMPOST BUILDING INVESTMENT  
STATE INCENTIVES FOR BIOMASS ELECTRICITY • BACKYARD COMPOSTING DEVELOPMENTS  
OVERCOMING BARRIERS TO MARKETING RECYCLED ORGANIC PRODUCTS**

**I**N BOULDER COUNTY, Colorado, the name Eco-Cycle has long been synonymous with recycling. Founded in 1976, Eco-Cycle remains one of the oldest and largest private nonprofit recyclers in the country. Recognizing that recycling is only part of the picture, however, Eco-Cycle is now going beyond recycling and into the world of composting.

“Recycling rates are stagnant at about 30 percent through the recovery of the ‘traditional’ materials — paper and containers,” explains Eco-Cycle’s Executive Director Eric Lombardi. “To fulfill our mission of maximizing diversion from the landfill, we have to go after the rest of the waste stream. With about half of the remaining waste stream consisting of potentially compostable materials, we need to start composting.”

The landfill tipping fee in the Boulder area is ridiculously low at a mere \$12 per ton. Thus Eco-Cycle’s entry strategy into composting needed to be carefully planned. We took a four-pronged approach: Initiating a commercial food residuals collection program; Exploring options for a compost site in the ever more densely-populated Boulder area; Creating high-quality compost products to gain marketing experience; and Educating the community about the importance of recovering this valuable resource.

#### **SUCCESSFUL COLLECTION PILOT**

Beginning with a grant of \$8,470 from Boulder County to help offset some of the extra overhead costs, Eco-Cycle launched a six-month pilot program in February 2004 to collect commercially-generated compostable waste from a limited number of diverse businesses in Boulder. The focus of the pilot was intentionally narrow: To teach all employees in a participating business the importance and value of proper source separation of compostables from trash for the purposes of both maximum diversion and ultimately for the highest quality compost.

The pilot began with nine businesses and institutions, including restaurants, cafeterias, flower shops, a small grocery co-op, and



### COLLECTION/SYSTEM/PRODUCT

# ECO-CYCLE VENTURES INTO COMPOSTING

one small manufacturer, a local chai brewer (this *is* Boulder, after all!). Over the course of the six-month pilot, the number of participants grew to 14, including the dormitory cafeterias of the University of Colorado, where university officials wanted to begin practicing source separation in their kitchens in preparation for the inauguration of their own in-vessel composting operation. To do the actual composting, Eco-Cycle partnered with A-1 Organics, a well-established composter with a site in an adjacent county 18 miles from central Boulder.

It was a given that hauling efficiencies would be poor during the pilot. Eco-Cycle used a box truck with a lift-gate to collect full

*Boulder, Colorado organization starts with food residuals hauling, works with composter, while planning for in-vessel system and projects with local growers.*

*Dan Matsch*

**To launch the composting phase of the project, Eco-Cycle is partnering with A-1 Organics whose site is 18 miles from Boulder.**





**After an employee at a participating business places food residuals in a dumpster (far left), Eco-Cycle's new commercial collection truck makes a pick up.**

port the program, but eventually, as program manager Dale Ekart puts it, they will want to see the result in the bottom line.

"We'd like to see if we can bring the total number of participants to around 50 in the next phase," Ekart says. "From the pilot results, we project that our costs will be around \$11 to \$12 per pickup. The standard charge to participants for the service will be \$15 per pick up. If we can divert enough waste from the trash that participants can either reduce the frequency of trash service or the

size of their dumpster, overall waste service costs will remain constant."

Whole Foods Market recently signed up for the service with Eco-Cycle, adding a designated roll-off compactor specifically for compostable waste from all departments of its Boulder store, its largest store by volume in the country. In the first two months of participation, the store composted 67 percent of its total waste. With recently completed additional training, they expect to meet their goal of 70 percent diversion in the near future.

toters from businesses on a once or twice per week schedule and then hauled 20 totes at a time to the A-1 composting site for manual unloading. Participating businesses were not charged for the service while Eco-Cycle learned what kind of diversion rate to expect from the different types of businesses.

As the pilot phase wrapped up in September, participants saw a 30 percent decrease in their garbage, and were thrilled to see resources move from the trash bin to the compost bin.

Eco-Cycle is now transitioning into a second phase of the program, expected to last an additional six to eight months, during which we will test the revenue and expense assumptions established during the pilot. Because of the high recycling ethic and environmental awareness in Boulder, Eco-Cycle expects that there is a certain number of businesses willing to pay extra for the service at first to sup-

#### **THE CHEAP DISPOSAL CHALLENGE**

Central to the long-term success of the composting service is the improvement of hauling efficiencies. Eco-Cycle purchased a used rear-load packer truck that has taken over the food residuals route. Ekart will be closely monitoring the number of pickups per hour, expected to be somewhat fewer than a standard trash route.

## **LOCAL COMPOST SITE WITH IN-VESSEL SYSTEM**

**L**ONG before initiating the compost pilot, Eco-Cycle began scouting around the area for potential composting sites closer to the population centers so we could eventually minimize hauling costs. But undeveloped industrial properties are in short supply and land costs are astronomically high. Also, there is the ever-present danger of a semi-urban composting site being shut down because of odor complaints. Eco-Cycle is still looking for the ideal site, but to mitigate the odor concerns and land costs, we are exploring the possibility of stabilizing the material using an in-vessel composting system that can be placed close to town on a minimally-sized property, and then curing the compost at a second, more isolated site

if space does not allow for curing at the in-vessel site.

Our determination to find our own composting site is not based solely on the economics of reducing hauling costs; it's part of our philosophy that as populations increase and natural resources dwindle, we need to stop dumping our trash on our neighbors and start looking at it as the valuable resource that it is. Educating the public about reducing waste and the wise use of resources has always been the centerpiece of Eco-Cycle's mission. Eco-Cycle strives to create solutions to our local waste management dilemmas that can be models for the world, and a local composting site can be an enormously helpful educational tool.

**In greenhouse trials with basil (below), plants sprayed with compost tea showed resistance to an outbreak of grasshoppers. A trial with Peace Lilies (below right) demonstrated significant differences from compost tea vs. control plants.**

The truck is equipped with a toter-tipper and a container washing system so that it can pick up both toters and small dumpsters and give them a quick rinse when tipped if they start to get too odorous. Ekart selected the standard trash truck design because it is easy to find as the fleet needs to expand, and the trucks can be used for multiple purposes.

the Boulder city limits has cost Boulder taxpayers nearly \$5 million and counting in cleanup costs since it was shut down in 1991 by Subtitle D regulations. Unfortunately, this too is largely ignored or forgotten.

Yet on our side of the county line, opportunities to find a few acres for composting are few and the possibility of neighborhood opposition is real. Advocating for a site is a challenge almost on the same scale as trying to convince people to recycle newspaper was nearly 30 years ago.

#### **COMMUNITY-BUILDING TO REACH OUR GOAL**

Unlike siting, good compost can sell itself. The key to reaching our goal is to make the connection in people's minds between healthy soil, good local food, and their own compostable discards. Boulder is home to a flourishing farmers' market that is popular in large part because its structure highlights local growers and the importance of local agriculture. So to begin building visibility for our composting program, Eco-Cycle purchased a 25-gallon compost tea brewer, set up some plant trials to demonstrate the effectiveness of compost tea, and staffed a booth at the farmers' market.

Our positive trial results drew plenty of interest and customers had a great time experimenting with the tea on their gardens and lawns. We sold our product at \$6 a gallon, and before noon on the first day, we realized we had to buy a 100-gallon brewer to meet demand. Most importantly, the tea proved to be the community conversation piece we had hoped for to start building community enthusiasm for our composting vision.

We plan to expand our work at the farmers' market next year by making it the nation's first Zero Waste Farmers' Market. We will add vermicompost and composting worms to our sale inventory and expand our testing of compost tea with local growers and perhaps some plots on City parks or golf courses. And some day soon, we'll have our own finished compost to sell. ■

*Dan Matsch is the compost program manager with Eco-Cycle, based in Boulder, Colorado.*



Flexibility and lean operating costs will also be paramount to the ultimate success of the program, because though people who live in Boulder County generally want to do what's best for the environment, they also are accustomed to paying some of the cheapest landfill disposal rates in the country. The tipping fee at the A-1 composting site is \$16.50/ton (as compared to the \$12/ton landfill fee). Add to that the extra hauling distance and time, and Eco-Cycle has quite a challenge making the program cost-effective in the long term.

With no operating landfills in Boulder County, the old adage, "out of sight, out of mind," is extremely difficult to overcome. The nearest operating landfill, just over the county line, recently won an expansion of over 100 acres with virtually no notice in Boulder. Without knowing or understanding the alternatives, Boulder residents will be sending their compostable trash to the landfill for many years to come, ensuring the emission of methane and other greenhouse gases and the polluting of our groundwater for generations. Standing as testament to the problems landfills inevitably create, a landfill-turned Superfund site just outside

Reprinted From:  
January, 2005

## **BIOCYCLE**

JOURNAL OF COMPOSTING & ORGANICS RECYCLING

419 State Avenue, Emmaus, PA 18049-3097

610-967-4135

For more information, visit: <http://www.biocycle.net>