

Building Business Partnerships to Maximize Savings in Solid Waste Management and Recycling



NEBRASKA
RECYCLING
COUNCIL



Carrie Marshall

Building Manager, Arbor Day Foundation



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You Thought It Couldn't
Be Recovered

HEFTY ENERGYBAG™ PROGRAM



Goals of the Program

- ❖ Divert previously unrecyclable plastics away from the landfill
- ❖ Have them converted directly into energy as an alternative to coal
- ❖ Advance the vision of a “circular economy” for plastics

Initial pilot program



- ❖ In 2014, Dow and Reynolds launched the Hefty[®] EnergyBag[™] program as a pilot in Citrus Heights, CA
- ❖ Was able to collect about 8,000 bags and produced 512 gallons of synthetic crude oil

First Star brings innovation to Nebraska

- ❖ In 2016, First Star saw to it that Omaha would be the first city to launch the program on a permanent basis
- ❖ Began as a strictly residential program, but has since expanded to include commercial businesses



Program elements

- ❖ Residents may buy 8 gallon bags at www.heftyenergybag.com, or at Hy-Vee starting in November
- ❖ 30 gallon and 55 gallon options are available from First Star for commercial use
- ❖ Bins are also available through First Star which contain educational information



How it Works

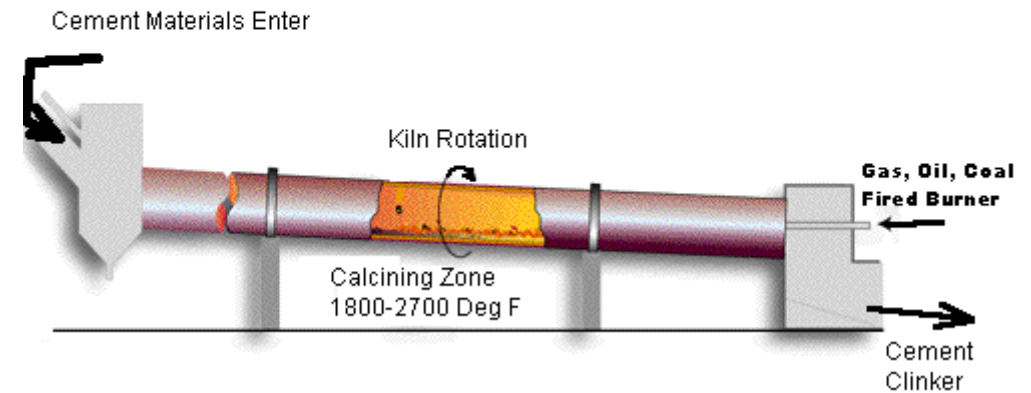
- ❖ Any non-recyclable plastics (aside from PVC) may be placed in the bags
- ❖ Bags are tied off and tossed into the customer's normal recycling container, where they are then taken to First Star



How It Works

- ❖ Energy Bags are then taken to Systech in Kansas City
- ❖ Systech burns the plastic in a cement kiln, as a replacement for coal
- ❖ Any ash left over is mixed into the concrete

ILLUSTRATION OF SIMPLE CEMENT KILN



Common Items

- ❖ Acceptable items include a wide variety of common home and office products
- ❖ These products cannot be recycled by traditional methods because they are not compatible with most MRFs sorting equipment
- ❖ Great for office break rooms, lobbies, kitchens, and other common areas



IF YOU DON'T BIN IT, BAG IT!

Check this list for the many non-recycled plastics that can be collected in your Hefty® Energy Bags that currently don't belong in your recycling bin, cart or can.

- toothpaste tubes
- cake mix liners
- snack bags
- plastic cups, plates, bowls
- foam cups
- stand-up pouches
- condiment packets
- salad bags
- squeezable pouches
- cereal pouches
- plastic cereal box liners
- laundry pouches
- potato chip bags
- pudding cups
- foam "to-go" boxes
- frozen potato bags
- plastic cheese bags
- plastic bread bags
- plastic pet food bags
- plastic meat packaging
- frozen fruit bags
- frozen vegetable bags
- candy wrappers
- plastic deli meat packaging
- single-serve coffee pods
- disposable razors (without the blades)
- packing peanuts
- plastic liners from powdered mixes
- microwavable pouches
- plastic straws & stirrers
- hotdog bags
- plastic utensils
- plastic meat trays
- juice pouches
- all other non-recycled plastic bags
- food bags

#ENERGYBAG

Program acceptance

- ❖ As of September 2017, the Omaha program has collected about 16,000 bags and 8 tons of plastic was diverted from the landfill
- ❖ The program is currently expanding to include more commercial users



Recycling's most challenging venues



- ❖ First Star secured a three-year contract with Metropolitan Entertainment & Convention Authority to have the Hefty® EnergyBags™ in TD Ameritrade Park for the College World Series
- ❖ During the 2017 CWS, 444 bags were collected

Taking the message beyond the home

- ❖ Recently, UNO became the first campus to adopt the program
- ❖ The bags were handed out to students on move-in day, and the university is setting up bins around campus



What are the benefits?

- ❖ Another tool to aim for landfill reduction
- ❖ Can save you money on waste expenses by decreasing the amount of trash pick ups you require
- ❖ Can be a marketing tool for businesses whose customers and employees value sustainability and environmental friendliness

What effect does this process have on the environment?

- ❖ Plastic burns cleaner than coal
- ❖ Use in cement kiln reduces sulfur dioxide emissions by 50 percent
- ❖ Reduces carbon dioxide emissions by 1.5-2 percent
- ❖ Hope to eventually move to a pyrolysis or gasification processes which would create usable synthetic oil or gas

Where it goes from here

- ❖ Dow wants the program to be running in 50 cities the size of Omaha or larger in the next five years
- ❖ First Star will be on consulting team for expanding it to four more states in the region
- ❖ If everything goes as planned, Hefty[®] EnergyBag[™] will become the new standard in plastic recovery efforts, placing Neb. on the cutting edge of sustainability

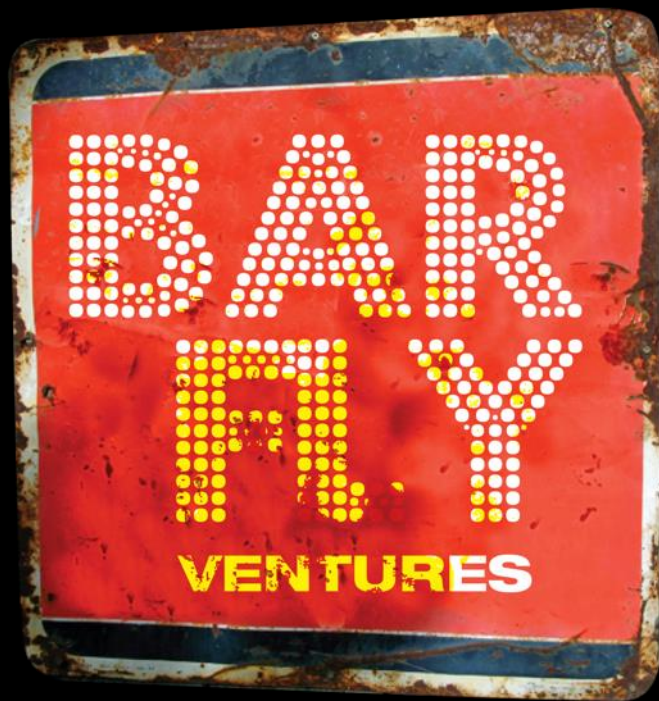


Autumn Sands

Sustainability Manager, BarFly Ventures



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Our Restaurant
Waste Stream :

65%
RECYCLING

25%
COMPOST

> 10%
LANDFILL /
INCINERATE



RECYCLE



- ✓ CARDBOARD
- ✓ PAPER & MENUS
- ✓ PLASTIC
- ✓ METAL / ALUMINUM
- ✓ GLASS

*Recycling Bins Must Be Un-Bagged!

Recycling diverts precious materials such as metal, paper, and plastic from the landfill. It turns discarded waste into new products.

COMPOST



- ✓ ALL FOOD WASTE
- ✓ STRAWS & FRUIT
- ✓ COMPOSTABLE PRODUCTS
- ✓ NAPKINS & PAPERTOWELS

*Lined with Green Compostable Bag Only!

When we compost, we make soil, not trash! Composting diverts food and organic waste from landfills and creates healthy soil that returns nutrients back into our food system.

LANDFILL



When we throw
something “away...”
Where does it really
go?



DON'T BE TRASHY!

THIS IS A ZERO-WASTE EVENT

our recycling and compost bins responsibly

RECYCLE
BOTTLES · CANS
CARDBOARD
PAPER · PLASTIC
METAL

COMPOST
FOOD WASTE
PLATES · CUPS
CUTLERY · STRAWS
NAPKINS









HOPCAT
GREEN TEAM





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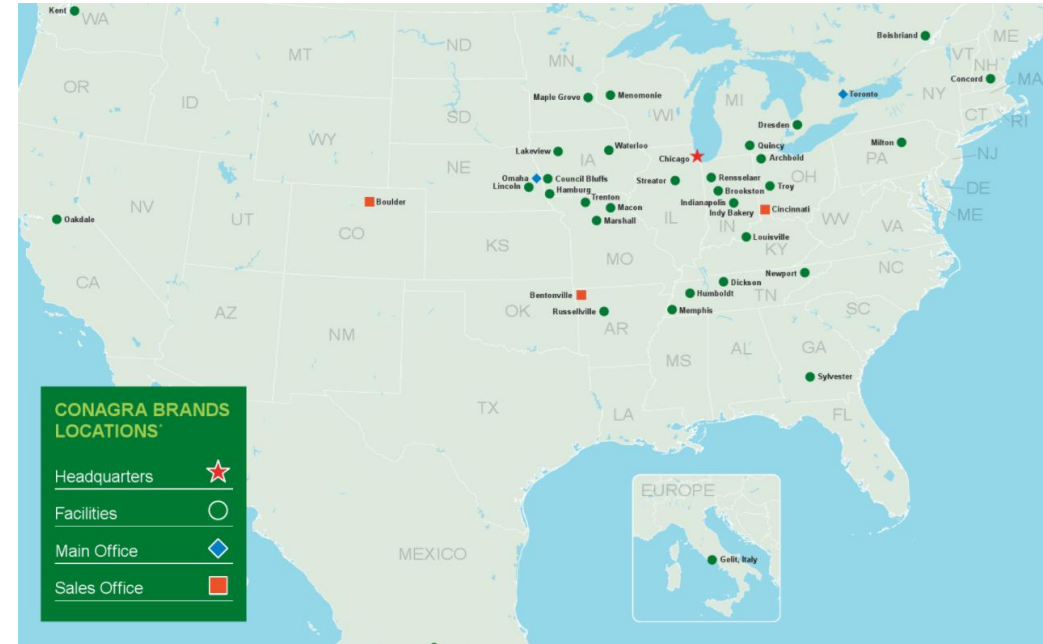
Nebraska Recycling Council Annual Meeting

October 19, 2017

Background



- 30+ Production Facilities
- Frozen foods, canned food, snacks, & more
- Mostly rural locations



Conagra Brands Waste Reduction



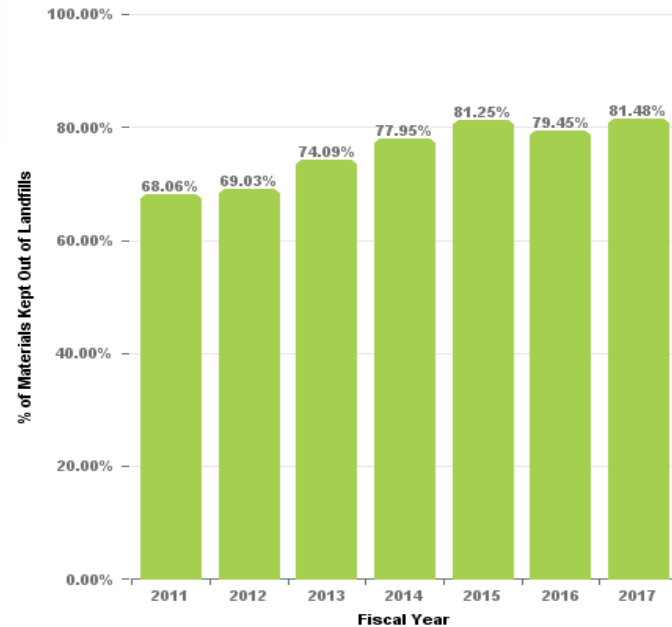
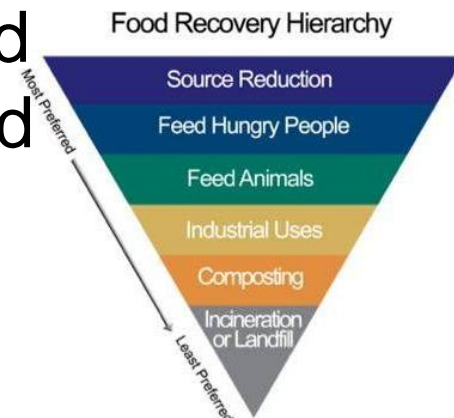
Focus efforts on reducing waste generation and improving waste diversion

Continue to follow EPA's Food Recovery Hierarchy

Conagra Brands was one of the first companies to become a USDA EPA Food Loss and Waste Champion – reduce food loss and waste 50% by 2030



66.03% Organics	
Food	
Animal Feed	- 27.97%
Composting	- 5.59%
Donation	- 0.89%
Energy Recovery	- .0012%
Food Oil/Grease	- 1.86%
Mixed Organics	- 5.54%
Wastewater Sludge	- 24.18%
15.67% Inorganics	
Aluminum	- 0.054%
Cardboard	- 8.80%
Mixed Metals	- 0.72%
Mixed Paper	- 0.50%
Mixed Plastics	- 0.82%
Mixed Recyclables	- 0.64%
Wood	- 3.96%
Waste to Energy	- 0.18%



Accomplishments



Zero Waste Champions

- 95% or higher Diversion Rate



Sustainable Development Awards



Lincoln, Nebraska

PrairieLand Dairy

Firth, Nebraska

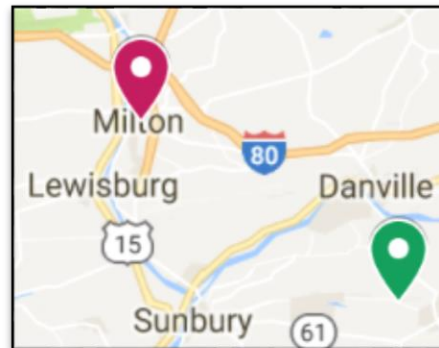
200

tons of waste
per year



Popcorn and paper towel waste is mixed with cow waste and yard waste and made into PrairieLand Gold compost.

Milton, Pennsylvania



A local vendor found a use for waxed cardboard by creating fire-starters, in addition to recycling all corrugate, metals, paper, and plastics.

Jeff's Recycling

1,900

tons of waste
diverted per year

**Unique diversion
opportunity**

Macon & Marshall, Missouri



Bluebird Compost

3,100

tons of food
waste per year

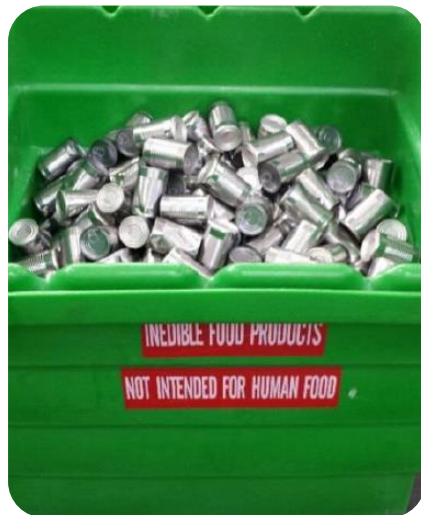
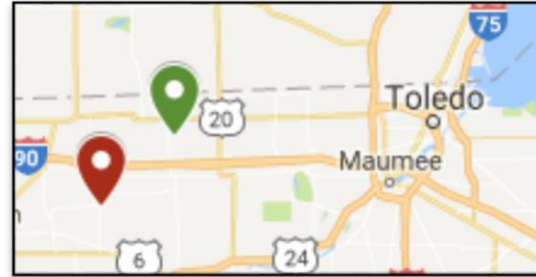
**Aggregating similar
waste streams**



Through industry contacts, a composter was found for two frozen-foods plants in Missouri to divert vegetables, sauces, and breading from landfill.



Archbold, Ohio



Partnering with an area farm, our cannery in Archbold, Ohio helped secure a grant to de-package, compost, and recycle waste locally and cost-effectively.

Andre Farms

2,500
tons of food and
packaging waste
per year

**Partnership to
improve
infrastructure**

Opportunities & Lessons Learned



- Understand all available options
- Collaborate with similar industries, area businesses, and vendors
- Shorter contracts are often beneficial
 - Aid in diverting more material
 - Enable new contractors and local partners to be competitive

Summary

- Local partnerships provide unique opportunities
- Pooling resources allow for new infrastructure or solutions to present themselves
- Employee engagement and passion is key for program success





Dave Haldeman

Administrator, Land Management Division,
Nebraska Department of Environmental Quality



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COLLABORATION
IS THE KEY



ANNUAL

AWARDS LUNCHEON

& WORKSHOPS

