



### Thunderbird Hotel and Convention Center, Bloomington, Minnesota

#### Prior to the changes:

- Food waste, cardboard, and containers made of glass, aluminum, and steel were disposed of in the dumpster

#### Changes made:

- Food waste was collected for recycling as animal feed
- Cardboard, glass, aluminum, and steel containers were separated and recycled
- The amount of food being disposed of was reviewed and ordering changes were made so less was thrown out

#### Cost:

- \$45 per month in recycling pick-up fees
- \$5,000 for a cardboard baler
- \$128 monthly food recycling pick-up fee

#### Savings:

- \$597 in costs associated with disposal of cardboard, glass, aluminum, and steel
- 20% reduction in volume of disposed food
- \$323 in costs associated with dumpstering food

## Restaurant cuts disposal costs by reducing and recycling solid waste

The Thunderbird Hotel and Convention Center in Bloomington prepared meals for restaurant patrons and catered events. Meals were prepared from food that arrived fresh or in aluminum and steel cans or glass containers.

Disposal costs increased from \$35.75 per ton in 1990 to \$95 per ton in 1991<sup>1</sup>. The rising cost of waste disposal prompted interest in a recycling program.

### Waste Reduction Process

#### Container Waste

The hotel's recycling and waste reduction program began by keeping recyclable containers out of the dumpster. This included cardboard, glass, and aluminum and steel cans. A cardboard baler and containers for glass and cans were placed next to the dumpster. This made it easier for employees to remember to recycle rather than discard recyclable materials.

Independent haulers picked up recyclable materials for substantially less than disposal. Implementing the recycling program cost time in training employees to recycle, and approximately \$5,000 for a cardboard baler. The Thunderbird spent \$45 per month to have materials picked up for recycling. Therefore, restaurant's net savings was \$597 per month.

#### Food Waste

The restaurant also wanted to reduce the amount of food waste discarded in the dumpster. The head chef used a computerized system for monitoring food inventory, the amount of food prepared, and the percent of waste per meal. When

checking the amount and type of food disposed of, the head chef routinely found usable food. Food preparation measures were changed, resulting in a 20% reduction in the total volume of food disposed.

Second Harvest Farms, Inc., a local food by-product recycling firm, worked with the head chef to set up a food recycling program. Second Harvest Farms provided containers that were stationed in meal preparation areas and dish washing sites where staff could easily put food scraps. Second Harvest Farms picked up full containers six times per week, eliminating the need for long-term storage of food waste.

Before any material can be used as a livestock feed, the livestock producer is required to obtain a permit from the Minnesota Board of Animal Health. Two types of permits are available to livestock producers: exempt materials and garbage feeder permits.

Exempt materials permits allow livestock producers to feed non-meat food waste to livestock. The food by-products must have no possibility of meat contamination for an exempt materials permit holder to accept it.

Garbage feeder permit holders can accept meat by-products and other food by-products that may have come in contact with meat. This food waste is required to be cooked prior to feeding to help prevent the spread of disease. Minnesota

### Monthly Cost Savings and Tons Recycled

Material	Savings	Tons
cardboard	\$428	4.5
glass	\$190	2.0
aluminum and steel cans	\$24	.25
total	\$642	6.72

state law requires that all meat by-products and other food by-products that may have come in contact with meat must be cooked at 212°F for 30 minutes and facilities and trucks must be inspected each month.

Approximately 4.75 tons of food per month were recycled with Second Harvest Farms, saving the restaurant \$451 per month in disposal costs. The cost for recycling pick-up was \$128 per month. This resulted in a net savings of \$323 per month.

## Conclusion

This recycling program eliminated food waste, cardboard, glass, aluminum and steel containers from the dumpster. It also reduced the restaurant's disposed waste by 50%, saving the restaurant a total of \$919 per month. According to the head chef, the success of this program required daily management of the recycling area and the support of employees to work effectively.

## Notes

<sup>1</sup> *Tipping fees vary dramatically from year to year. Re-evaluated in 1995, disposal costs were lower, at \$60 per ton.*



## For More Information

MnTAP has a variety of technical assistance services available to help Minnesota businesses implement industry-tailored solutions that maximize resource efficiency, prevent pollution, increase energy efficiency, and reduce costs. Our information resources are available online at <[mntap.umn.edu](http://mntap.umn.edu)>. For personal assistance, call MnTAP at 612.624.1300 or 800.247.0015.