## KUM & GO



## CHELSEA TOMEK INDUSTRIAL ENGINEERING & ENVIRONMENTAL STUDIES IOWA STATE UNIVERSITY

# WEST DES MOINES

#### **COMPANY BACKGROUND**

Kum & Go is the fifth largest privately held, company-operated convenience store chain in the United States, with more than 430 stores in 11 states. Kum & Go distinguishes itself from its competitors with a few remarkable features. It has maintained more than 50 years of dedicated community commitment by sharing 10 percent of its profits with charitable and educational causes each year. Most notably, Kum & Go continues to lead the industry in customer service and convenience.

#### **PROJECT BACKGROUND**

Kum & Go is a champion of environmental sustainability. With their participation in the 2010 intern program, the company spearheaded numerous energy reduction initiatives transferable to both new and existing stores. The goal of this year's project is to pinpoint opportunities to divert waste from lowa landfills and optimize the company's waste management practices.

#### **INCENTIVES TO CHANGE**

Kum & Go is striving to become the top convenience retailer in the country by 2021. In recent years, a strong emphasis has been placed on sustainability, which has resulted in a new store design and improved construction and operational practices. As the company continues to grow, Kum & Go will distinguish itself by taking innovative steps forward in the field of sustainability.

#### **RESULTS**

Because Kum & Go operates a variety of different store types in a variety of different locations, the first step was planning a strategy for conducting numerous waste audits in locations that could represent an accurate cross-section of stores. The intern then conducted audits at 12 different stores in partnership with the lowa Waste Exchange, and analyzed the resulting data to develop areas of opportunity.

**Single-Stream Education:** Approximately 25 percent of all Kum & Go stores have single-stream recycling systems, which accept assorted mixed recyclables in addition to cardboard. However after waste audits were conducted, the intern found that single-stream recycling is being underutilized. Upon further investigation, it became clear that many associates are not aware of what they can recycle and do not

have a convenient place to collect recyclables internally. To address these issues the intern worked with store associates to identify all recyclable materials and then worked to develop a "Recyclable Materials" reference sheet, designed to be hung on the wall or placed next to a recycling container so that associates can quickly decide if an item is recyclable. This sheet, combined with additional employee training, will increase associate utilization of the single-stream recycling containers.



### CONVENTIONAL AIR POLLUTANTS AND GREENHOUSE GASES DIVERTED IN STANDARD TONS

Total for all sectors							
CO <sub>2</sub>	SO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> 0	CFC	PM <sub>10</sub>		
1,035.00	-	-	-	-	-		



Food Waste Composting Pilot: As Kum & Go moves to become a more food-oriented convenience store chain, the amount of food waste the stores produce will increase. Food waste was in the top three waste categories based on weight (but not volume) at every store audited. The intern examined the option of collecting and composting the food and other compostable waste. There are few composting options in the state and limited options when trying to serve stores statewide. The intern recommends evaluating store kitchens for future bin placement, associate training, and signage. When an affordable option is available, a pilot test of compostable waste collection could be done in Des Moines where the service is available, and those results could be used to determine the most feasible method of expanding this program throughout the chain.

Can and Bottle Recycling: One of the easiest ways to divert waste at Kum & Go stores is to collect recyclable cans and bottles at the pump. Currently, customers visiting the store have no convenient recycling option for their cans and bottles (besides redemption in lowa), even if the store has single-stream recycling available. As a result, most of them end up in the trash. Cans and bottles account for 6 to 8 percent of waste at most Kum & Go stores, so installing pump-side containers to collect recyclable cans and bottles would quickly and easily divert most of this waste. If the six-week pilot test of this program is successful, it is recommended that Kum & Go expand this program to all stores that use single-stream recycling.

PROJECT	ANNUAL COST SAVINGS	ENVIRONMENTAL RESULTS	STATUS
SINGLE STREAM EDUCATION	\$20,100	199 TONS	RECOMMENDED
FOOD WASTE COMPOSTING PILOT		17 TONS	RECOMMENDED
CAN & BOTTLE RECYCLING	\$3,600	97 TONS	TESTING
DATA COLLECTION (VIA WASTE AUDITS)	\$2,700 (ONE TIME)		COMPLETED

