PRINCIPAL FINANCIAL GROUP

ANNABEL SEELING
INDUSTRIAL ENGINEERING
THE UNIVERSITY OF IOWA

COMPANY PROFILE
Principal helps people and companies around the world to build, protect and advance their financial well-being with retirement, insurance and asset management expertise. With innovative ideas and real-life solutions, Principal makes financial progress possible for clients of all income and portfolio sizes. A member of the FORTUNE 500®, the Principal Financial Group has $572.2 billion in assets under management and offices in 18 countries throughout Asia, Australia, Europe, Latin America and North America.

Principal is headquartered in Des Moines, Iowa, with about 6,000 employees working at its corporate campus and about 15,000 employees worldwide. Principal is consistently ranked as one of the best workplaces in the United States. In 2015, Principal was also named a CDP S&P 500 Climate Performance Leader for the third consecutive year and a CDP S&P 500 Climate Disclosure Leader for the second straight year.

PROJECT BACKGROUND
The goal of this project was to increase diversion of solid waste from the landfill through the implementation of source reduction, reuse, and recycling strategies at the Des Moines campus. Principal has a process in place for recycling cardboard and office paper at the corporate campus. The 2016 Pollution Prevention intern worked on developing a profile of the current waste stream going to the landfill and identifying opportunities to reduce generation and increase diversion of the landfilled materials.

INCENTIVES TO CHANGE
Leaders of Principal's corporate campus management team outlined a set of high level initiatives that should be followed in order for the corporate campus to meet its 2016 sustainability goals. In the area of waste and recycling, the goal is to "minimize waste in our operations, business activities, and construction projects through improved communications and processes for more consistency and increased landfill diversion." The corporate campus management team is also focused on employee participation in sustainability initiatives through education and communication campaigns.

RESULTS
A waste audit was first conducted at the Principal corporate campus in four of the nine most occupied employee buildings. Data compiled from the audit indicated there were opportunities to divert additional materials from the landfill stream and potentially alleviate some wastes from being generated.

Cafeteria Disposable Containers: Waste audit results revealed that non-recyclable plastic or Styrofoam to-go containers make up a large portion of the waste generated at the campus. These containers originate in Principal's campus cafeterias. The intern researched options for eco-friendly containers and developed strategies to reduce the actual number of containers needed to contain

PROJECT	ANNUAL COST SAVINGS	ENVIRONMENTAL RESULTS	STATUS
CAFETERIA DISPOSABLE CONTAINERS	-	2.7 tons	RECOMMENDED
COMPOSTING PROGRAM	$4,661	212 tons	RECOMMENDED
RECYCLING COLLECTION BAGS	$4,227	165 tons	IN PROGRESS
LABELING OF RECYCLING RECEPTACLES	$950	37 tons	RECOMMENDED
IMPROVED HAULING SCHEDULE	$20,000	-	IN PROGRESS
WEATHER-BASED IRRIGATION	$1,116	393,077 gallons	RECOMMENDED

or transport food. A compostable container was chosen to replace Styrofoam containers. Alternative containers such as paper bags can also be used to eliminate the use of some containers all together. Employee training and discounts for employees will also help encourage the use of dine-in dishware, further reducing the need for disposables.

Composting Program: More than 50 percent of the waste profiled in the audit was found to be compostable, with food waste representing a large portion of this percentage. A composting provider in the Des Moines area was found that could pick up unprocessed compost material directly from Principal. Diverting compostable waste from the landfill would reduce disposal costs and help advance Principal toward meeting its sustainability goals.

Recycling Collection Bags: While conducting the waste audit, it was observed that the bags collected from the recycling receptacles in the office areas were often thrown in the trash compactor along with the regular trash bags. Using a different colored bag in the recycling receptacles would provide easy recognition for segregation of the recyclable materials from the material sent to the landfill. Different colored bags would be more recognizable and could streamline the handling process. Communication and training for staff is key to the successful implementation of any process changes to ensure consistent implementation.

Labeling of Recycling Receptacles: Recycling receptacles throughout the corporate campus are not clearly marked to specify the materials to be placed in them. Many items that could be recycled are placed in trash receptacles. Providing clearer guidance and placing instructional stickers with pictures on the containers would help clarify which items should be recycled. Improved labeling could increase participation in the recycling program and divert a significant volume of waste from the landfill.

Improved Hauling Schedule: An analysis of the waste hauling collection schedule showed that Principal's trash compactors were being picked up more often than needed. Restructuring the current waste hauler's pick up schedule could reduce Principal's annual waste hauling costs.

Weather-Based Irrigation: Principal uses an irrigation system to keep its corporate landscaping healthy and vibrant. A weather-based control system can postpone the watering of landscaping when a rain event is predicted to occur. Sensors are another option that can be added to a control system to trigger watering based on the amount of moisture in the soil.