PEPSICO

Gatorade Water Use Optimization

Student Team:

Katie Cameron – Master of Business Administration Wes Davis – Master of Business Administration and Master of Science in Environment& Sustainability

Project Sponsors:

Tim Carey – Vice President, Sustainability Tony Grinstead – Engineering Manager, Dallas Gatorade Andy Lempera – Director, Engineering Sustainability Chris McKenna – Senior Principal Engineer, Sustainability John Thibodeau – Senior Vice President, Engineering

Faculty Advisors:

Lennart Baardman – Ross School of Business Steven Skerlos – College of Engineering

PepsiCo is a Fortune 100 food and beverage company that has publicly committed to 2025 Sustainability Goals which include significantly reducing the amount of non-product water used in the Gatorade production process. These goals are particularly important to water-stressed locations like Dallas where water usage will be reduced by 30%. The Tauber team developed a path for the Gatorade plant in Dallas to achieve PepsiCo's 2025 water usage sustainability goal by evaluating the full extent of their current status, reviewing proposed initiatives, recommending new water saving initiatives, and implementing approved projects.

To understand the plant's current status, the team updated water usage data by taking measurements of flow, analyzing existing data, and confirming the accuracy of data already being recorded. The team then collected and reviewed water-savings initiatives in order to evaluate the potential savings of future projects. These estimates were used to create a phased plan that will lead the plant to their water use goals. Forecasted changes in production were also modeled and the resulting change in water use can be employed to build in flexibility to the plant's pathway to achieving their sustainability goals.

The Tauber team then began implementation of water savings projects to ensure the site remains on target to achieve annual goals and jump start the plant's water saving initiatives. The targeted efforts included optimizing water use during flavor changeover, reducing wasted water in the steam system, and reclaiming water during weekly cleaning processes. The water savings from the implemented projects account for an estimated 6.5MM gallons of the estimated 60MM gallons that need to be saved by 2025.