Full Circle Feed
& The New York State Pollution Prevention Institute

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About

Full Circle Feed manufactures dog treats from unused meats, vegetables, fruits, and breads from restaurant buffets that were prepared but not served. The result is a healthy and environmentally-sustainable dog treat.

With an organizational commitment to sustainability, Michael Amadori, President of Full Circle Feed, is constantly seeking ways in which he can reduce waste in the company’s manufacturing processes. This success story profiles a business connection that allowed Full Circle Feed to uphold its brand promise and improve its standing in environmental sustainability.

Outcomes through FuzeHub Connections

• Full Circle Feed forged a new business relationship with Rochester Institute of Technology’s NYS Pollution Prevention Institute an organization funded by the New York State Department of Environmental Conservation.

• Full Circle Feed benefitted from adapting more environmentally sustainable processes.

Situation

In order to produce dog treats, Full Circle Feed collects the leftover human-grade foods from local establishments. The food waste, which includes a high volume of high-quality, fresh food, is picked up by Full Circle staff and then brought to its processing facility.

Before the leftovers ever make it into a treat, they are cleaned, ground up, and cooked under high heat and pressure conditions. Once formed into treats, they are baked and then packaged.
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**Needs**

In order to maintain its competitive product, Full Circle Feed sought solutions that would be cost-effective and maintain its dedication to “healthy food and a clean planet.” Full Circle Feed sought alternative methods for the processing of treats that could increase the company’s efficiency, reduce energy use, and reduce waste.

**Engagement**

In 2013, Full Circle Feed attended a FuzeHub Solutions Forum and met with representatives from Rochester Institute of Technology’s NYS Pollution Prevention Institute (NYSP2I). Through the connection, Full Circle Feed received assistance in the following areas:

- **NYSP2I performed a wastewater analysis** to determine what the company’s output of organic and solid waste was.
- **NYSP2I performed an energy drying analysis** which quantified the amount of energy needed to dry the dog biscuits and the impact of airflow speed on drying time.

The results of the testing showed that the company’s wastewater had high levels of organic and solid waste. Also, the company suspected that too much energy was being used in the drying phase of its manufacturing process. The collaboration revealed that the company could utilize forced-air convection to decrease drying time and save energy. Additionally, the company could use a settling tank to reduce organic solid output.

**Outcomes**

- Forced-air convection oven reduced drying time by 64%, resulting in a corresponding reduction in energy usage and an estimated $1344 savings in annual energy costs based on current production rates.

- The settling tank reduced organic content waste by over 50% and can reduce potential sewer surcharges once Full Circle Feed expands and produces more wastewater.
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With help from The New York State Pollution Prevention Institute and FuzeHub, Full Circle Feed has redoubled its commitment to its core mission to deliver a sustainable product that is healthy for pets and the planet.

“The partnership between FuzeHub and NYSP2I enabled Mike Amadori from Full Circle Feed to obtain the support he needed. NYSP2I was able to identify inefficiencies and opportunities to improve Mike’s production process.”

– Kim Bawden, NYSP2I Pollution Prevention Engineer

“The services and guidance provided by NYSP2I were instrumental in helping Full Circle Feed’s production process. We had experienced and knowledgeable engineers helping us solve problems related to heat transfer and energy demands for drying our dog biscuits. They also quantified the energy potential in our wastewater for use in anaerobic digestion. We have incorporated the results of these findings in our design and production process.”

– Michael Amadori, Full Circle Feed