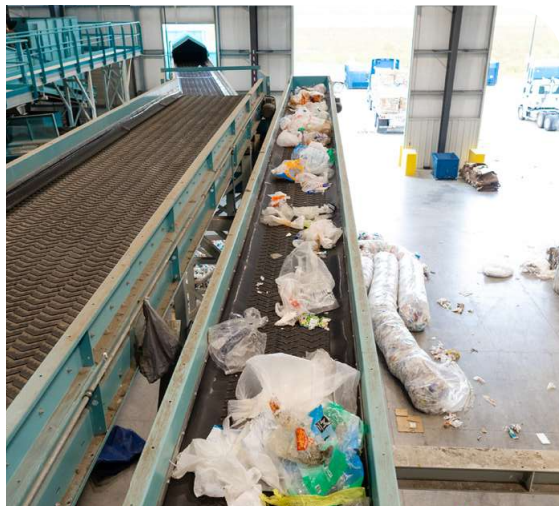




Diverting Incidental Film and Flexibles from Landfill in San Antonio

Balcones, San Antonio, Texas: Case Study



At a brand-new materials recovery facility (MRF) in San Antonio, Texas, film and flexible plastics will be among the processed materials. The seventh-largest city in the United States, San Antonio has close to 1.5 million residents. The city accepts drink bottles, yogurt cups, and other commonly recycled plastics as part of its curbside recycling program, but other types inevitably end up in the stream.

Companies such as Circular Services, which owns and operates MRFs around the country including the Balcones facility in San Antonio, are exploring new technology solutions and end markets for this hard-to-recycle material.

“Film and flexibles represent more than 2% of the single stream material delivered into our MRFs today,” said Joaquin Mariel, chief commercial officer for Balcones and Circular Services. He noted that the material tends to get tangled in equipment and contaminates other commodities such as mixed paper and cardboard. And because most film and flexibles are lightweight, they contribute to windblown debris.

At the same time, Mariel added, “It is also a material type that is increasing in prevalence in the recycling bin and holds significant potential value to downstream processors and end users.”

Multiple pieces of equipment at the new facility will be dedicated to recovering and baling incidental film and flexible packaging from San Antonio's single-stream recyclables.

A grant from the Film & Flexibles Recycling Coalition supports both a blower that will separate out lightweight materials, and an optical sorter which further filters the material before it is sent to a compaction unit that aggregates material for baling. The grant is demonstrating the equipment and operational adjustments necessary to capture a significant quantity of film at low contamination rates, which will be crucial for success in California.

Balcones completed installation and startup of the equipment in August 2024, according to Mariel, and the facility is still in the process of fine tuning. Currently, the facility is recovering approximately 214.5 tons of incidental film and flexible packaging per year on one shift, with the potential to double that amount as material volumes support a second shift. As the program scales, Balcones is actively developing end markets for the recovered material, with long-term projections estimating up to 1,530 tons by 2030.

“We have made multiple test loads of material,” he said. “This grant was important to Balcones because it gave us the opportunity to prove a concept for effectively sorting incidental film and flexible packaging from commingled material.”

KEY TAKEAWAYS

INSTALLATION: AUGUST 2024

1ST YEAR: 214.5 TONS ON 1 SHIFT, POTENTIAL TO DOUBLE IF 2ND SHIFT ADDED

2030: 1,530 TONS ANNUALLY