



Executive Summary

2022 Greater Seattle Plastic Film Recycling Circularity Pilot Report

Results show good quality and quantity of post-use plastic film collected through retail takeback programs, demonstrating the value of this material and the viability of these programs to support plastics circularity.

A pilot program to recycle plastic film and plastic bags in the Seattle area collected and processed 50,000 pounds of materials at 10 drop-off locations over five months. The program identified local partners to collect, sort, then process materials using a return-to-retail approach. The success of the pilot — from drop off and customer education to transportation and processing — shows both the viability of community programs to recycle these plastics, as well as the downstream value for these recycled materials in a circular economy for plastics.

This pilot was directed by Return-It, a non-profit recycling organization, and funded through the American Chemistry Council's (ACC) Wrap Recycling Action Program (WRAP), an outreach initiative to increase the recycling of plastic (polyethylene) film packaging. The sponsors of the pilot included Dow, NOVA, General Mills, and PAC Worldwide.

How it Worked

- Drop-off bins were placed at 10 retail locations in King County between January 18 and May 31, 2022. Along with the bins, retail participants were provided with a consumer awareness toolkit designed to build program credibility and boost participation from both collection partners and consumers.
- Local company Commercial Waste Reduction and Recycling (CWRR) was selected to collect materials from the pilot's retail locations. The total amount of material collected was the equivalent of 30-35 bales at a total weight of 50,000 lbs. (about twice the weight of a school bus).
- Material collected by CWRR was delivered to local company Seadrunar for sorting. Seadrunar sorted materials, removed contaminants, baled materials, then shipped them to processing partner Merlin Plastics.
- Audits conducted at Merlin Plastics indicate that any remaining contamination levels within the pilot's samples were consistent with about 94% of each bale having useful plastic, an especially high success rate.
- Merlin Plastics processed the recycled materials into resin or reusable pellets. Audits show clear film to have been approximately 71% of the total volume and colored film to have been approximately 23% of the total volume.

Conclusions

Building on best practices learned from previous efforts and incorporating new elements, the pilot program demonstrated how the approach could operate as a stand-alone voluntary program or as a complementary and cost-effective program for future multi-material stewardship or Extended Producer Responsibility (EPR) programs established in the United States.