



Merlin History

- 1987 ♦ Merlin Plastics was founded in Delta, British Columbia to process post-industrial plastics.
- 1991 ♦ Merlin expanded to include the processing of post-consumer natural and colored HDPE (eg. milk jugs).
- 1992 ♦ Post-consumer rigid HDPE material (eg. pails, buckets) was added to our process.
- 1995 ♦ Post-consumer Film was added to our processing line.
- 1996 ♦ A post-consumer PET processing line was developed in British Columbia.
- 2000 ♦ Merlin Plastics Alberta was founded to focus on processing PET containers from Western Canada.
- 2004 ♦ USA Patent No. 6,752,192 was issued to Merlin Plastics for the pre-wash technology that was first developed in 1996.





Merlin History

- 2006 ♦ Obtained FDA approval for post-consumer PET Flake for food contact.
- 2009 ♦ Peninsula Plastics Recycling (PPR) was incorporated as a full service PET recycler and processor in Turlock, California.
- 2010 ♦ Obtained FDA approval for post-consumer PET Pellet for food contact.
- 2014 ♦ Acquired an interest in ORPET, an Oregon recycler, and partnered with the Oregon Beverage Recycling Cooperative to recycle PET bottles in Oregon
- 2015 ♦ State-of-the-art container sortation facility in New Westminster, BC was commissioned to sort cartons, ferrous and non-ferrous cans, plastics and glass.
- 2016 ♦ Acquired assets of Entropex in Sarnia, Ontario. Upgraded and re-designed the sorting, washing and processing systems and we are now currently processing 3 to 7 containers on the East Coast.





Challenges with Plastics # 3 – 7

Sorting

- Economically challenging due to high capital costs and significant operating costs.
- Technically demanding and requires highly trained staff.

Processing:

- Commodity prices fluctuate in an oil-based environment compared to the operating costs being fixed in an urban environment (i.e. collection cost is fixed).
- Processing has a high capital cost and is skill-intensive.
- If we wish to work towards the goal of a true Circular Economy, then I believe it can only succeed if the right policies are in place. Policies would be enacted to reward and recognize – a carrot and stick method - in my mind this is critical to help move us away from a ‘linear’ mindset and towards a ‘circular’ end of life packaging mindset.
- To make the Circular Economy a reality, I respectfully submit that we all have a role to play. The end of life/packaging/reusability cycle requires the cooperation of government, brand owners, and the recycling industry:
 - Brand owners would efficiently design their product for recyclability and the circular package life cycle.
 - Governments would establish policies to reward and promote the circular economy concept and recyclable packaging.
 - Curbside, recycling depots and downstream processors would acquire the knowledge, skills, infrastructure, and the needed resources.
 - Everyone in the chain would work cooperatively for all to benefit; no single industry or company can do it by themselves.





Challenges with Plastics # 3 – 7

Marketing/Pricing

- Over capacity of virgin resin estimated for 2018.
- Carbon footprint of oil-based virgin resin is significantly higher than the carbon footprint of the same volume of recycled material. The associated environmental cost is not priced into the package. Recycled resin is otherwise at a disadvantage as those underlying costs are not fully recognized.
- Recycling market has challenges/difficulties when there is an over supply of oil-based resin in one hand and no recognition for low carbon footprint packaging in the other hand.

