Recycling for Zero Waste
Developing a zero waste framework for adding (or removing) packaging from a recycling program.

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About Eureka Recycling

- Zero Waste Social Enterprise
- 90,000 tpy Single Stream MRF
- Residential Recycling Collection Fleet
- Zero Waste Events
- Preventing Wasted Food Programs
- Zero Waste Products Buying Co-operative
- Education and Advocacy
Eureka Recycling’s Zero Waste Lab™

Work collaboratively to identify Zero Waste strategies as solutions to issues of:

• Climate Change
• Local Economic Development
• Environmental Justice
Our Zero Waste Metrics: Why do we Recycle?

- Technical Feasibility and Economics
- Environmental Impacts
- Human Health Impacts
- Changing Systems to Move us Towards Zero Waste
Technical Feasibility & Economics

- Economics of collection, sorting, transportation, and processing
- Redundant, stable market options
- Market value and impact on other grades
- Capture rate, impact on residual (including bale audits) and scale
Human & Environmental Impacts

- Environmental impact including climate change, air and water quality, wildlife
- Human health impacts of product, manufacturing, use, and end of life
Move us Closer to Zero Waste?

- What are the viable end market uses? (Ability to recycle again)
- What alternatives are available for the item and how do they compare?
- How does recycling or composting the item change systems?
- Synergy to impact other waste reduction
- Impacts on educating residents, advocacy and policy objectives
- Transparency and verifiable
Example: Glass

- **Economics of collection, sorting, transportation, and processing**
  - Rough on equipment
  - Heavy to collect
  - Investment in MRF cleanup system increases net value and environmental impact

- **Redundant, stable market options**
  - Limited market options - secondary processor
  - New market opportunities and uses being explored

- **Market value and impact on grade**
  - Negative value
  - Cheaper than disposal tip fee for City
Example: Glass Cont.

- Human health impacts of product, manufacturing use and end life
  - ✓ Non-toxic, made from an abundant resource
  - ✓ Using recycled glass saves energy, reduces air and water pollution

- Impacts on educating residents, advocacy and policy objectives
  - ✓ Potential for refillables, long history of recycling, deposits.

- Ability to recycle again – What are the viable end market uses?
  - ✓ Truly closed loop product- Can be infinitely recycled, creating no additional waste or byproducts
  - ✗ Impacts of single stream collection have lowered recovery of bottle to bottle
✓ Glass

• Not the cheapest to recycle, but....
  – Environmental Impact
  – Human Health Impact
  – Ability to move towards zero waste

• Opportunities:
  – Highest and best use
  – Additional market options
Example: Soda & Beer Boxes

- **Economics of collection, sorting, transportation, and processing**
  - ✔ Easy to collect with single stream
  - ✗ Additional sorting costs required to keep in separate stream

- **Redundant, stable market options**
  - ✔ Keeping grade separate allows for multiple market options as well as keeping our cardboard grade higher quality.

- **Market value and impact on grade**
  - ✔ Market value covers cost of additional sorting (We do lose value compared to marketing it with cardboard)
Example: Soda & Beer Boxes Cont.

- **What are the viable end market uses?**
  - ✅ Demonstration of highest and best use commitment to recycling.
  - ✅ made into cereal boxes

- **Environmental Impact:**
  - ✅ Maximized when accepted in separate stream to ensure it gets recycled

- **Human health impact:**
  - ✗ Uses additive that is not recovered through recycling.

- **System change**
  - ✅ Promotes use of glass/metal containers and avoids alternative, non-recyclable plastic...
Carrier Boxes

• Technical ability to sort and demonstrated markets
• Supports zero waste goals

• Opportunities:
  – Separate sort to maximize mill yield (environmental impact) and ensure redundant markets
Efforts to Drive Design

*Recycling Won’t Do it Alone*

- Zero Waste Lab – working with industry to identify opportunities and challenges
- Ordinances & Legislation
- Advocacy
- Investing in reduction together with recycling
What’s the real question?

“Is it recyclable?”

OR

“Is recycling the best solution for this discard stream?”