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Best Practices
in
Single Stream Recycling

by

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Re-Thinking Wastes

Recycling is a Resource Management System

- Recyclables are resources, not diverted wastes
- Garbage is the residue of a resource based economy

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Single Stream Recycling Is …

- All about collection efficiency
- A response to automated collection – you only need one cart

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Automated Collection

- Larger container = higher recovery
- Easier to store recyclables
- Easier to get to the curb
- Reduced worker injury
- Less litter on windy days
- Keeps the paper dry
- Fewer setouts increases efficiency

Don’t wait, automate now !

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It's easier to:

- Throw it all in one cart
- Wheel the cart to the curb
- Collect the cart contents
- Promote the program

But it's not as easy for the processor or manufacturer

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Single Stream Collection

- Savings in collection costs
- Higher processing costs
- Higher cost for new collection and processing equipment
- Higher manufacturing costs when processing not done right
- Overall not much change, but more recyclables collected

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Single Stream vs. Dual Stream

Cost Comparison

- Collection: $10-20/ton lower
- Processing: $5-15/ton higher
- Paper Production: $5-13/ton higher
- Average system: $3/ton higher

Source: American Forest & Paper Assn./Jaakko Poyry/ SERA 2004

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“Collection”

is not the same as

“Recycling”

There’s no market for some collected materials

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Recycling

is

making new products from recovered materials

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Paper Mill Single Stream Stats

- 8 times the yield loss at pulper (2% to 16%)
- $2 million/year to replace non-fiber materials received in paper
- 4 times increase in annual maintenance costs to repair damage
- Problems vary by type of paper mill

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Promote your program early and often!

You wouldn’t hire a promotions firm to your collect garbage,

so don’t ask your garbage collector to promote your program

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- Make sure your processing system can take apart what you collected mixed together
- Ensure that marketed materials meet manufacturers specifications *[ISRI]*
- Produce quality feedstock materials to maximize revenues

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Processing & Quality

- **Tons received v. equipment capacity**

  If equipment is rated at 25 TPH,
  the optimum rate is really 20 TPH,
  but facility is probably run at 30 TPH

- **Don’t overload the system**

- **Don’t skimp on staffing**

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Processing

- Receive only what you can separate
- Plan on receiving materials you don’t want
- Process in sequence to produce quality
- Meter flow of materials to minimize process line burden depth
- Eliminate material surges
- Don’t make a big storage pile, it degrades recyclables

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Processing Variables

- Design to process the number of streams of materials your facility will receive

  - single stream and dual stream

  - residential and commercial

- Plan for future growth
- Prepare for seasonal population changes
- Be ready for future changes in the markets for your recovered materials

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GLASS

- Bottles are not the problem, broken glass is!
- Glass is broken during processing
- Change to low-impact processing
  - – separate the glass before it breaks
    - allows removal of contaminants
    - allows color sorting of bottles

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Include feedback about materials quality from the manufacturers who buy your recyclables

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Market Focus

Sort materials into high quality feedstocks for sale to manufacturers!

‘**It’s Good Enough**’

is not good enough!

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Market Compatibility

- Types of materials collected
- Targeted Recyclables
- Unwanted Recyclables
- Unwanted Wastes
- Problem Materials

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Sample …

- collected materials to identify contaminants
- processed recyclables to make sure you are shipping the right material to the right buyer
- residue to make sure you are not discarding recyclables

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