Recyclers Guide to Understanding SMM
Part I:
What do NRC Members currently do with SMM?

SMM Summit Webinar

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Traditional Solid Waste Management Hierarchy

Waste Prevention / Source Reduction

Reuse / Repair / Upcycling

Recycling / Composting

Final Disposal
  Waste-to-Energy
  Landfilling / Incineration without Energy Recovery
Traditional Recycling Infrastructure

The Recycling Symbol

Collection/Material Recovery/Processing

Manufacturing/Market Development

Buying Recycled/Closing the Loop
Goals for Waste Diversion or Recycling

- Zero Waste
- 75%
- 50%
- 25%
- 10%

Measuring Downstream and/or Creating Formulas
But many things outside our control effect our ability to be successful recyclers....

- What products are manufactured
- How products are manufactured
- What products are consumed by whom
- Where products are consumed
- What materials are collected (contractual or desired)
- Toxicity of materials
- How materials are processed
- Where markets exist
Just when we think we have it figured out...

- Dairy farms add pigment to their milk jugs that effect HDPE pricing and processing.
- Electronic manufacturers used various plastic grades and screws that effect demanufacturing and recycling.
- PET bottles are wrapped in PVC labeling creating a contaminant.
- Biobased plastics show up and risk contamination of PET.
- Carpet can’t be recycled because it is made with two incompatible resins.
- Some export markets prove illegitimate.
- Vacuum packaging of products.
- Electronic components in shoes, household items, toys.

......any design or manufacturing or material change upstream can effect the ability to recycle it downstream.
More examples of challenges ....

- Items that cannot be repaired (shoes, appliances)
- Batteries that cannot be replaced (iPods)
- Over packaging
- Plastic bags creating maintenance challenges at MRFs
- Single-stream contamination
- Mixed waste processing contamination
What are the opportunities through SMM?

- National policy dialog
  - CARE – Carpet industry dialogs
  - Electronics Producer Responsibility
  - RBRA – Battery collection and recycling
- Increase communication between upstream and downstream
  - Develop considerations for material discards from design
  - Awareness of what might be coming down the pike
  - Opportunity to influence those decisions
- Meeting waste reduction and recycling goals
Sustainable Materials Management Model

Design → Manufacture → Distribute → Purchase → Consume → Collection → Process → Distribute → Re-manufacture

upstream → Waste Prevention → Consumption → Process → Waste → Reuse → downstream

- Climate Action Plans
- Corporate Policies
- Regulations and Laws
- Water Pollution
- Green Building Standards
- Jobs
- Energy Efficiency
- Air Regulations
- Water Pollution
- Energy Efficiency
SMM and the Circular Economy

Design for the Environment, Not the Dump
All products must be recoverable through reuse, recycling or composting

Shifting Subsidies
Stimulating green practices rather than favoring waste and pollution

Changing the Rules
Removing market barriers and inequities to support sustainable industry

Jobs, Jobs, Jobs
Redesign and recovery create more jobs than resource destruction

Clean Production
More resource efficient and recoverable, less toxic to workers, environment and consumers

Retail Stores
Opportunity for consumer education and product take-back

Consumer Buying Power
Creating market demand and a new manufacturing standard

Producer Responsibility
Manufacturers are part of the solution, taking back their own products or supporting recovery infrastructure

Resource Recovery Parks
Community center for total recovery—renew, recycling and composting—material exchange, and education

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Thank you!  Questions?

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