

# ISRI's NEW INBOUND MIXED RECYCLABLE SPECIFICATIONS

## Hitting the Contamination Problem

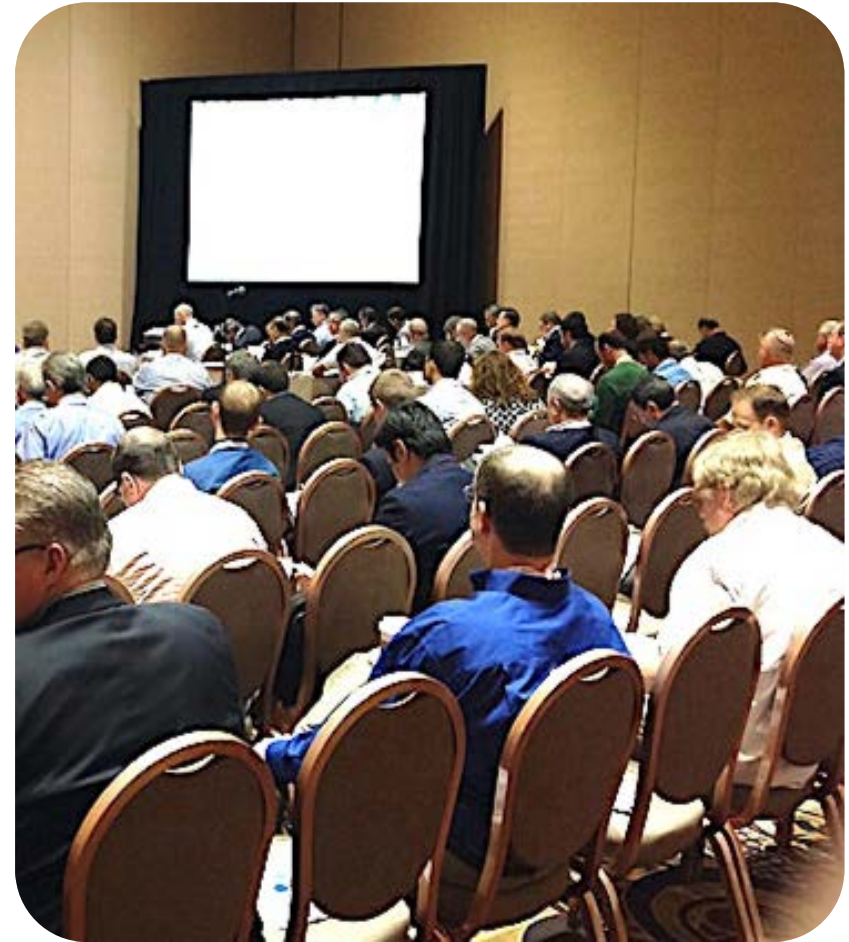
March 15, 2017

NERC Spring Conference



Institute of  
Scrap Recycling  
Industries, Inc.

- What Is ISRI?
- What are ISRI's Scrap Specifications?
- Understanding ISRI's Plastic Scrap Specifications



# What Is ISRI?

ISRI is a trade association representing more than 1,600 for-profit companies that process broker & consume scrap metals, paper, plastics, electronics, rubber, glass and textiles.



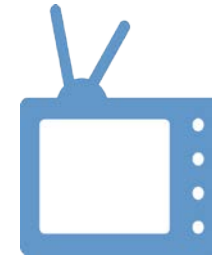
Ferrous & Non-ferrous metals



Paper



Plastics



Electronics



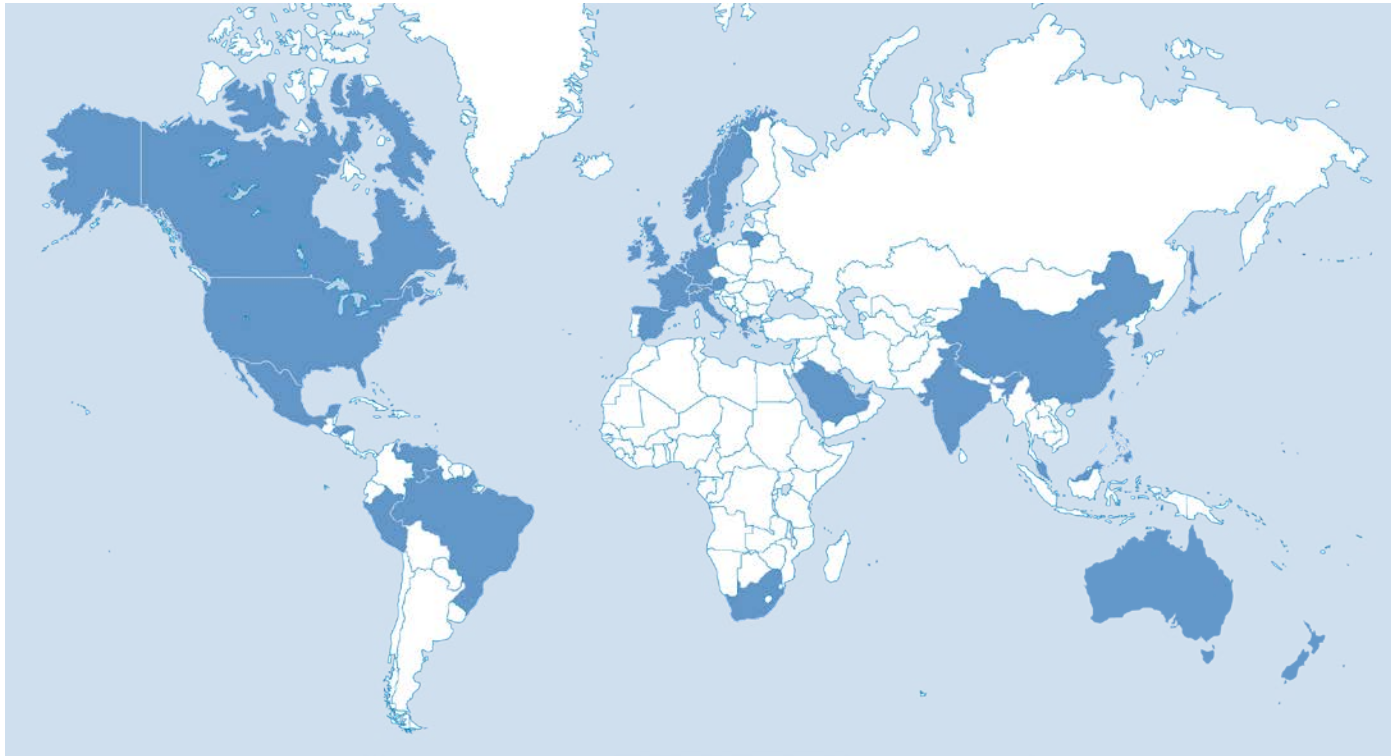
Glass



Rubber



Textiles



**1,600+**

Member  
companies

**7,000+**

Recycling facilities  
worldwide

**34**

Countries

# ISRI 2017

## CONVENTION & EXPOSITION

NEW ORLEANS • APRIL 22-27



**PSI** | **PAPER**  
**2017** | **SUMMIT**  
**SPECTACULAR**



APRIL 26 - 27 ✦ ERNEST N. MORIAL CONVENTION CENTER ✦ NEW ORLEANS

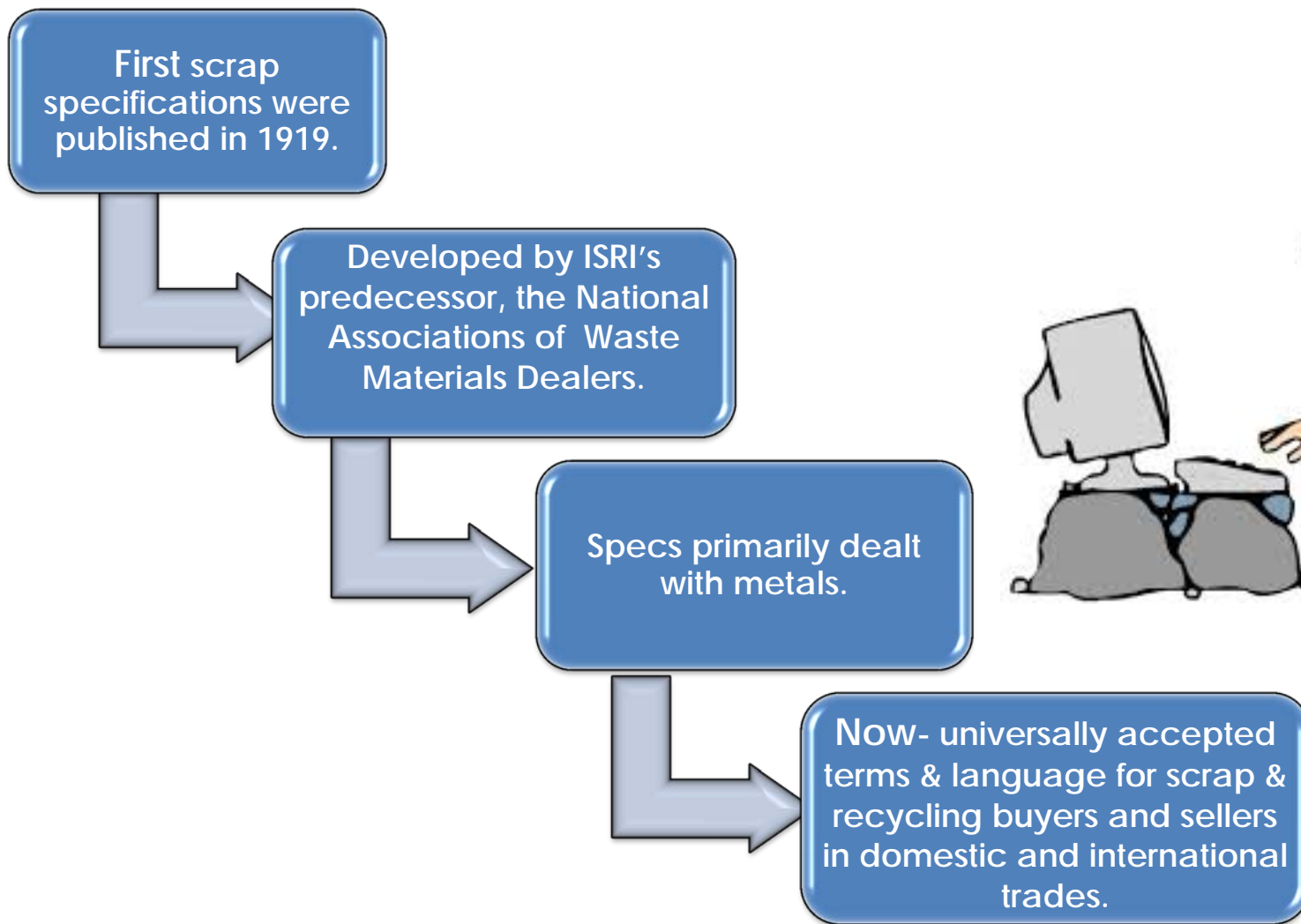
ISRI's 2017  
**Plastics Business**  
& OPERATIONS SUMMIT

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- Making a Curbside Program That Works Through Increased Outreach & Education
- Improving Plastic Quality by Implementing a Bale Audit Procedure
- Changes to the Downgrade and Rejection Policy in the Paper Scrap Specifications

[www.isriconvention.org](http://www.isriconvention.org)

# Scrap Specifications: History Primer



## National Association of Waste Material Dealers STANDARD OF PACKING OF WOOLEN RAGS

Circular No. 1, adopted June 16, 1914

### 1. MIXED SOFT WOOLENS:

This stock must be packed free from Linseys, Delaines, Cloth, Felt Boots and Unskirted and foreign material.

### 2. MIXED SKIRTED CLOTH:

Produced by ripping rough cloth. This stock must be packed free from Satinets, Linseys and Felt Boots.

### 3. MIXED ROUGH CLOTH:

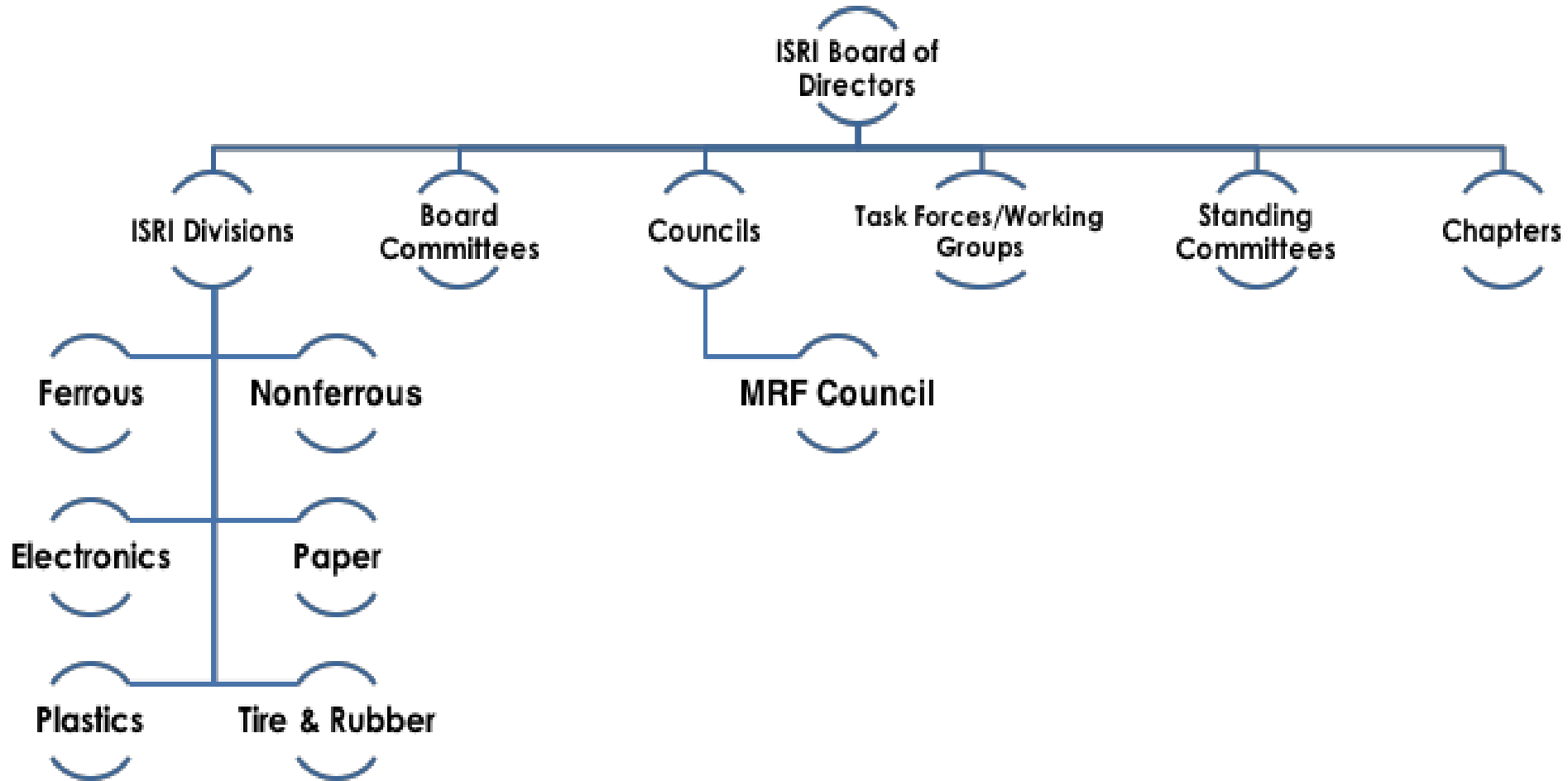
This stock must be free from all Skeletons, Satinets, Linseys and Felt Boots.

***Tare on the above grades must not exceed 5% on the net weight.***

# ISRI Governance: Divisions



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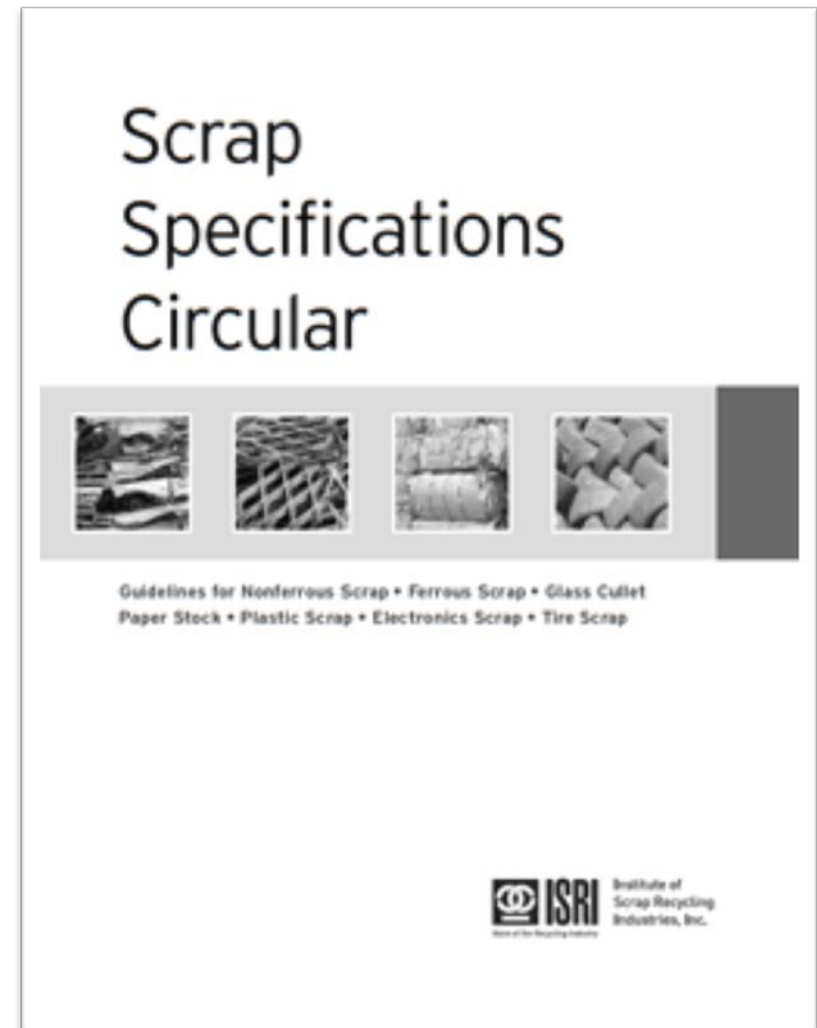
## Open forum for ISRI's members to discuss issues that impact MRF's

- The Council is Chaired jointly by both the Plastics and Paper Divisions
  - Inbound Specs subcommittee
    - RRS (chair), Ekman Group (chair), WM, Sims, Casella, Randy's, etc.
    - Input from independent MRFs and 3<sup>rd</sup> parties, entire paper and plastic divisions
  - Specification is fully reviewed with comments from the industry included in final document

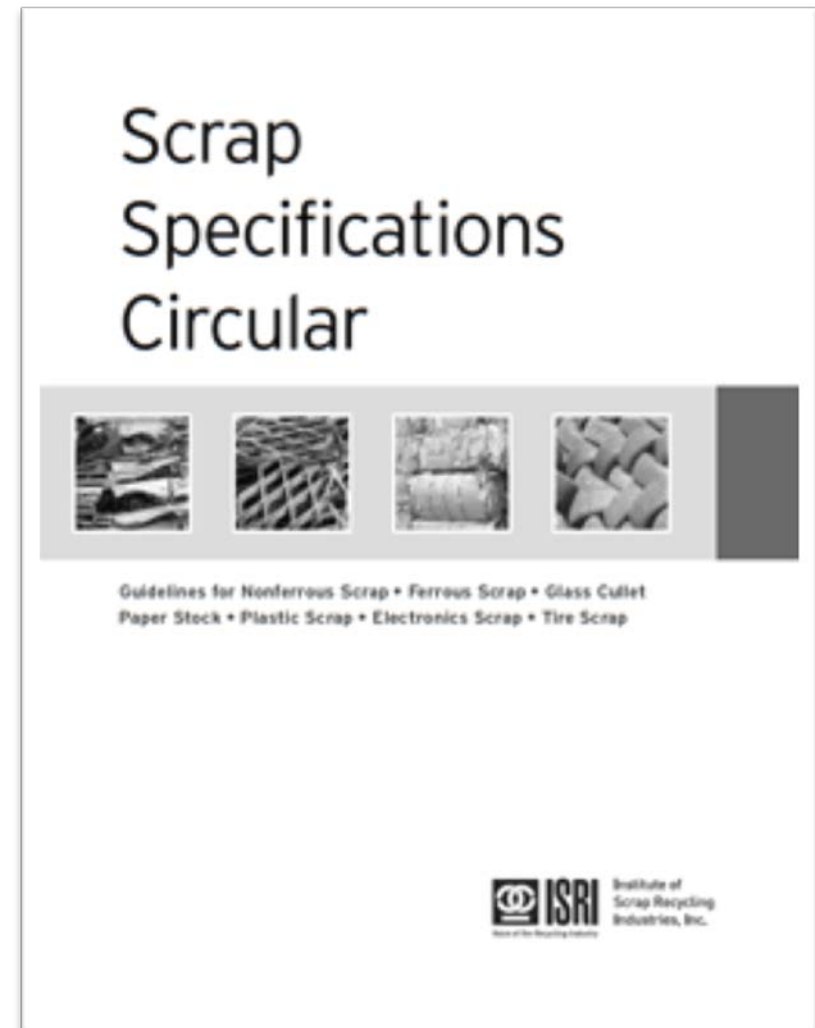
# Scrap Specifications: Overview

ISRI's Scrap Specifications are published in the **Scrap Specifications Circular** available at: [www.isri.org/specs](http://www.isri.org/specs)

1. Includes specifications for:
  - Ferrous Metals
  - Non-Ferrous Metals
  - Paper
  - Plastics
  - Electronics
  - Rubber
  - Glass
  - Transaction Standards
2. Includes information about ISRI's arbitration service
3. Updated continuously as materials change



- Designed to be a “floor” not a “ceiling” for transactions between buyers and sellers.
- Helps by providing definition to common terms and eliminates confusion of what is being discussed.
- Gives the parties involved a starting point from which they can conduct their negotiation.
- Delineates types of materials and minimum quality standards.



# Scrap Specifications: Inbound Scrap Specifications

- Developed by ISRI members through the MRF Council.
- Included in the next publication of ISRI's Scrap Specifications Circular.
- States general consensus of industry regarding materials that can and are being recycled through curbside collection by a majority of residential programs



Curbside Recycling Guidelines & Specifications Subcommittee, ISRI Paper and Plastic Division, Joint MRF Council. V.1 FINAL

CURBSIDE RECYCLING GUIDELINES

INBOUND RESIDENTIAL CURBSIDE MIXED  
RECYCLABLES for MATERIAL RECOVERY  
FACILITIES

SPECIFICATION & ADDITIONAL MATERIALS

# Inbound Residential Mixed Recyclable Specifications



## Materials List Criteria

- >50% Single and Dual Stream programs trade materials regularly (all materials in the list are in over 60% of all programs)

## Quality Limits

- Provided for each material type

## Flexibility

- Can be modified through mutual agreement between buyers & sellers
- Other inbound grades can always be proposed for specific common circumstances and municipal programs either limiting or expanding definitions

# Inbound Residential Mixed Recyclable Specifications



|  |  |
|--|--|
| <p><b>Paper/Acceptable Fiber (Acceptable)</b></p>  | <p><b>Paper (not preferred or may be prohibited) with examples (not inclusive)</b></p>   |
| <ul style="list-style-type: none"> <li>• All full-sheet office paper, white paper</li> <li>• Colored paper</li> <li>• Newspaper (plastic bags and strings removed)</li> <li>• Magazines (all types), catalogs (all types)</li> <li>• Phonebooks (all types)</li> <li>• Junk mail</li> <li>• Paperboard</li> <li>• Tissue boxes and tissue/towel rolls</li> <li>• Paper office folders</li> <li>• Paper towel and toilet paper rolls</li> </ul> | <ul style="list-style-type: none"> <li>• Shredded Paper</li> <li>• Napkins</li> <li>• Tissue paper</li> <li>• Wall paper</li> <li>• Paper towels</li> <li>• Wax paper</li> <li>• Wrapping paper</li> <li>• Any paper which has the potential to be contaminated with bodily fluid</li> </ul>   |
| <p><b>Cardboard (OCC) Acceptable</b></p>   | <p><b>Cardboard (not preferred or may be prohibited) with examples (not inclusive)</b></p>   |
| <ul style="list-style-type: none"> <li>• Paper Boxes- Packing boxes, corrugated liners, boxboard (i.e. shoeboxes, gift boxes, cereal boxes),</li> <li>• Brown or Kraft paper bags, brown wrapping paper, corrugated packing material.</li> </ul>   | <ul style="list-style-type: none"> <li>• Cardboard lined with plastic (i.e. bubble wrap boxes)</li> <li>• Waxed/waterproof cardboard.</li> <li>• Boxes containing food (i.e. contaminated boxes containing pizza, excessive oil, or cheese), excessive liquids, or other materials. Acceptable delivery boxes shall not contain any of these.</li> </ul> |
| <p><b>Cartons</b></p>  | <p><b>Non Acceptable (Some Examples)</b></p>   |
| <ul style="list-style-type: none"> <li>• Food and Beverage Cartons- such as milk, juice, aseptics and broth (must be empty, clean and dry)</li> </ul>  | <ul style="list-style-type: none"> <li>• Containers with moisture, other materials, or food residue still present, straws, etc.</li> </ul>   |
| <p><b>Plastics Acceptable</b></p>  | <p><b>Plastics (not preferred or may be prohibited) with examples</b></p>  |

# Inbound Residential Mixed Recyclable Specifications



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|   |   |
|---|---|
| <ul style="list-style-type: none"> <li>Plastics #1, #2, and #5 Bottles, jugs, jars, and containers; i.e. soda bottles, laundry detergent jugs, water bottles, milk jugs, and other household containers consisting of polyethylene terephthalate, high density polyethylene, and polypropylene</li> <li>Rigid Plastics- clean polyethylene plastics- toys, storage containers, file boxes, etc. (must be free of any other material)</li> </ul> | <ul style="list-style-type: none"> <li>Film and film bags not specified in design of the recycling program.</li> <li>Shopping, Grocery, Retail bags and small Plastic “Baggies”.</li> <li>Plastic tableware- (#3, #4, #6, &amp; #7 plastics, and in many cases #1, #2, and #5 plastics).</li> <li>Expanded polystyrene containers (EPS).</li> <li>Compound or layered multi-resin plastic receptacles.</li> </ul> |
| <p><b>Metals Acceptable</b></p>   | <p><b>Metals (not preferred or prohibited) with examples</b></p>  |
| <ul style="list-style-type: none"> <li>Aluminum and tin beverage and product containers (Food, beverage, and other containers’ materials must be completely empty of contents clean and dry)</li> </ul>   | <ul style="list-style-type: none"> <li>Metal containers with paper or plastic attached.</li> <li>Paint cans.</li> <li>Aerosol cans with liquids, propellants or pressure still in the can are prohibited.</li> <li>Metal containers with hazardous materials still in them are prohibited.</li> </ul>   |
| <p><b>Glass Acceptable</b></p>  | <p><b>Glass (not preferred or prohibited) with examples</b></p>   |
| <ul style="list-style-type: none"> <li>Bottles and Jars only (materials must be dry and clean) with minimum breakage</li> </ul>   | <ul style="list-style-type: none"> <li>All glass types not listed in the “Glass Acceptable Section”, (window pane glass, leaded crystal, borosilicate glass, clear ceramic products, etc.).</li> </ul>  |

# Inbound Residential Mixed Recyclable Specifications- Prohibitive List

- Exhaustive but may not be all inclusive
- Needed for protection of both parties in contracts
- Safety, Property, and Health Issues Addressed
- Language reviewed by qualified attorneys

**PROHIBITIVES: Unacceptable in any quantity. Subject to Immediate Rejection due to Health, Safety or Product Suitability Concerns:**

- E-waste and Electronics – such as Cell phones, IPad, IPods, any Computers, TV's, wires, Controllers, Printers, Printer rolls, and other materials
- Radioactive Materials of any kind.
- Hazardous Materials – such as Oil, Paint, Antifreezes, Powders, free or attached Asbestos or Asbestos-containing products, and Fertilizers.
- Corrosives – such as Batteries, containers with Acid or Base Residue.
- Compressed Gas Cylinders and other containers holding or formerly containing Flammable, Pressurized or Combustible Materials such as fire extinguishers, Process vessels, bulk Storage Tanks, (see restrictions on aerosol containers above).
- Lead and other Heavy Metals.
- Other Hazardous Wastes – such as Pesticides, Poisons, used Oil filters, Mercury-containing materials such as Switches and Thermometers, Biohazards, Fluorescents Lights, Tube toss.
- Refrigerants – such as Freon/Puron/Substitutes, Compressors, Air Conditioners, Refrigerators, Freezers.
- PCBs – such as Capacitors, Transformers, Ballast.
- Explosives – such as Firearms, Ammunition, Shells, Fireworks, used Gasoline Cans.
- Medical Waste – such as Needles, Syringes, Biohazard-labeled Containers, etc.
- Biological waste of any kind- such as Animal carcasses, Infestations, Skins, Leather, Bones, Organs.
- Other Hazardous Materials which may harm human health or cause property/workplace damage.
- Any Materials containing human liquids or wastes- such as Diapers, Tissue, etc.
- Green wastes- Plant, Wood, Leaves, Fruits, Vegetables and other Vegetative matter.
- Inert construction materials- such as Rock, Dirt, Asphalts, Concrete, Debris, Roofing, Dry Wall, etc.
- Gross contaminants which reduce product value significantly or completely.
- Bulk and Gross Materials Not Recyclable through a MRF: such as Tires, Fiberglass, Wood, Asbestos, Appliances, Furniture, Ceramics, Rags, Air Bags, common Light Bulbs, Crystal, Plate & Mirror Glass, other Solid Wastes.
- Free Flowing Liquids of any kind.



# Inbound Residential Mixed Recyclable Specifications- Additional Materials Advisory



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*“For various reasons such as mandates, policies, plant capabilities, customs, local markets (i.e. access to ocean export), and other factors, additional compatible materials may be collected in addition to the above materials for separation at material recovery facilities...”*

- Neutral and Advisory- meant for open discussion
- Reference Chart of other materials found in some curbside programs
- Current majority opinions on pros and cons of other materials Will be updated as market dynamics
- Local conditions will differ

| Material   | Pros | Cons |
|--|------|------|
| #1 - #7 mixed plastics   |      |      |
| #3 - #7 Plastics   |      |      |
| #6 Polystyrene and Expanded Polystyrene (PS)   |      |      |
| Flexible Packaging   |      |      |
| Mixed household film (bagged in bag)   |      |      |
| Mixed household film in mixed recyclables ('pick-line film')                             |      |      |
| Clean, dry double-polycoat food packages   |      |      |
| Thermoform food or bakery containers (delicatessen, fresh food) clear- i.e. 'clamshells' |      |      |
| Thermoform PET food or bakery containers (clear top, black bottom)                       |      |      |

# Inbound Residential Mixed Recyclable Specifications- Needs and Uses



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- Allows common starting point definitions.
- Can be used to facilitate conversations between recyclers and municipalities
  - Criteria for capital deployment and estimating potential costs
  - Performance of the parties
  - Quality
  - Outreach and Education
- Included in the next publication of ISRI's **Scrap Specifications Circular**.



Curbside Recycling Guidelines & Specifications Subcommittee, ISRI Paper and Plastic Division, Joint MRF Council. V.1 FINAL

## CURBSIDE RECYCLING GUIDELINES

## INBOUND RESIDENTIAL CURBSIDE MIXED RECYCLABLES for MATERIAL RECOVERY FACILITIES

## SPECIFICATION & ADDITIONAL MATERIALS

# Questions?



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