

Impact of the China Ban on Districts' MRFs

**LA County / Integrated Solid Waste Management
Committee Task Force Meeting**

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June 2018





DISTRICTS' MRFs



**Downey Area
Recycling & Transfer
Facility (DART)**

**Puente Hills Materials
Recovery Facility
(PHMRF)**





OVERVIEW

- Background.
- Timelines – National Sword and the China ban.
- Materials banned and effects of the ban.
- District's response – changes to operation and material specifications.
- Engaging traders/brokers.
- Closing comments.



BACKGROUND



2013

China launches Green Fence to reduce poor quality recyclables entering country.

Crack down on imports and importer practices.



2015



2017 TIMELINE – National Sword

- **Feb** – National Sword announced.
- **Apr** – Early effects observed.
- **Jul** – China proposes 0.3% max contamination for paper, bans plastics.
- **Sep** – Initial impacts reach MRFs.
- **Nov** – China increases contamination from 0.3% to 0.5%.
- **Dec** – China issues limited import licenses for 2018.



WHY NOW CHINA?





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2018 TIMELINE – China Ban

- **Jan** – Material flows away from China to Southeast Asia.
- **Feb** – PHMRF and DART focus on cleaner, higher-grade materials.
- **Mar** – China’s ban officially takes effect.
- **May** – China suspends CCIC inspections for one month.
- **Jun and beyond** – Anybody’s guess.



RECYCLABLES BANNED





RECYCLABLES BANNED



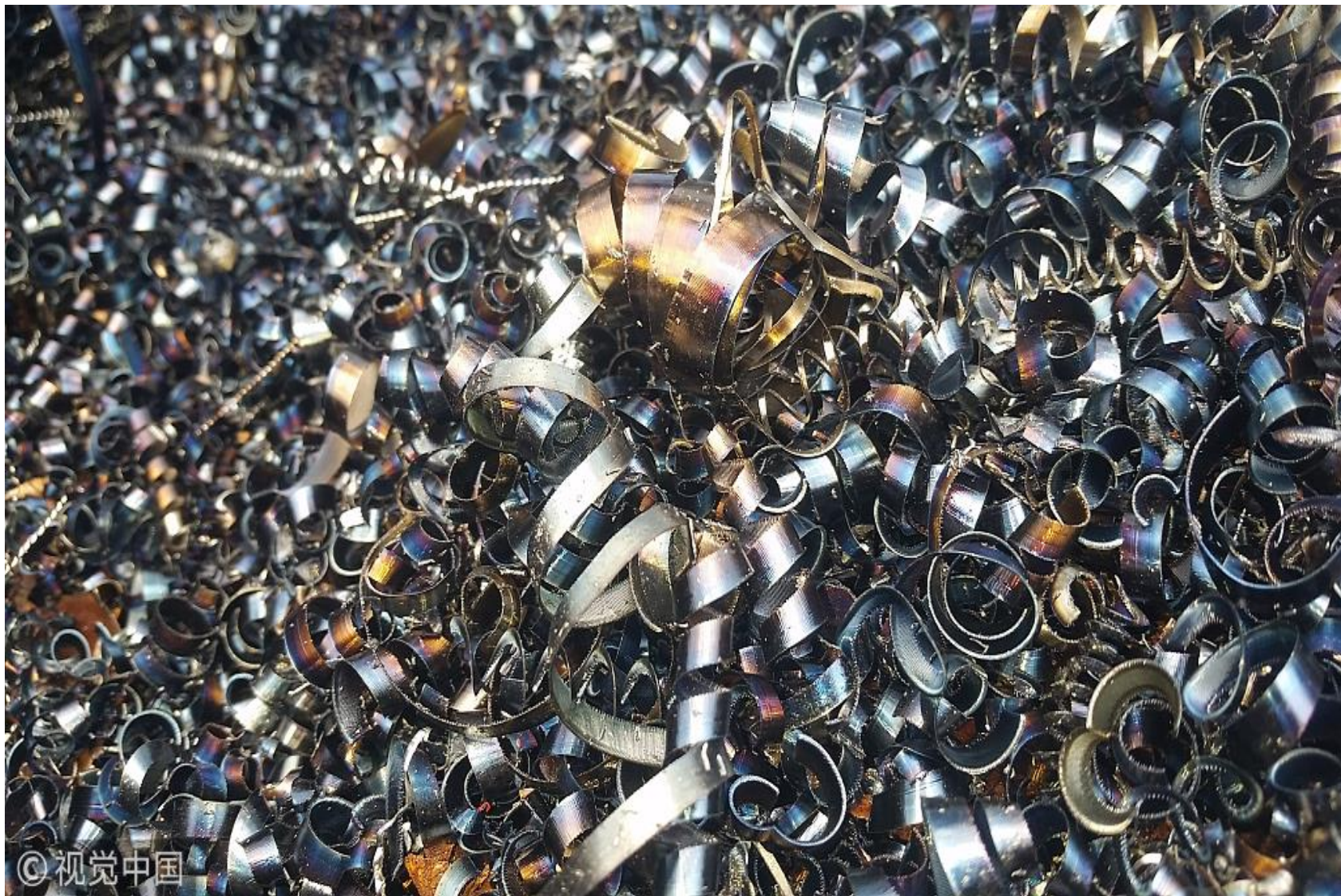


RECYCLABLES BANNED



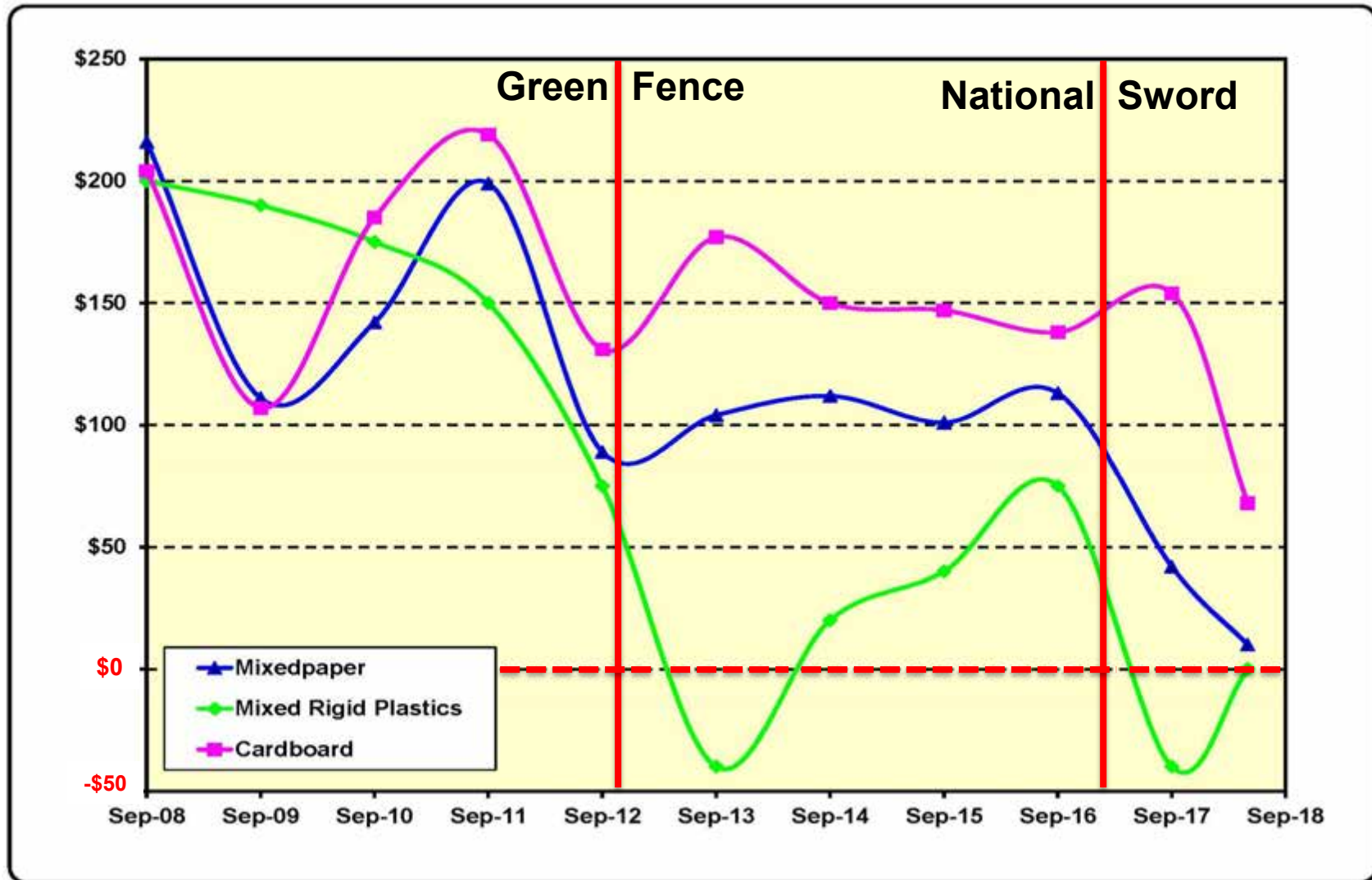


RECYCLABLES BANNED





COMMODITY PRICES (\$/ton)





EFFECTS OF THE BAN



100% container inspections



EFFECTS OF THE BAN



Rejection of imported recyclables



EFFECTS OF THE BAN



Unclaimed cargo at terminals



EFFECTS OF THE BAN



Hold or cancellation of orders





DISTRICTS RESPONSE TO THE BAN

- Prepared to make changes to the sorting operation and to the quality of commodities produced (material selection) at both sites.
- Ship to China at higher prices as opposed to Southeast Asia at lower prices.



CHANGES TO SORTING OPERATIONS





CHANGES TO SORTING OPERATIONS

- Changed recovery of mixedpaper from negative to positive sorting to reduce contamination.
- Slowed belt speeds (throughput) and reduced amount loaded on the belt to allow better selection and reduce contamination.
- Additional sorters were used as a final opportunity to remove contamination.



CHANGES TO MATERIAL SELECTION

- **Mixed paper** – More selective in types of paper recovered (left out junk mail, brown paper grocery bags, packaging used for frozen food products, etc.).
- **Cardboard** – Eliminated wet and contaminated cardboard, kraft/chip board (packaging used for pizzas, motor oils, cereals, egg cartons, etc.).
- **Plastics** – Left out oil and food containers and small pieces.



MIXED PAPER – Material Selection



Before

After





CARDBOARD – Material Selection



Before

After





PLASTICS – Material Selection



Before



After

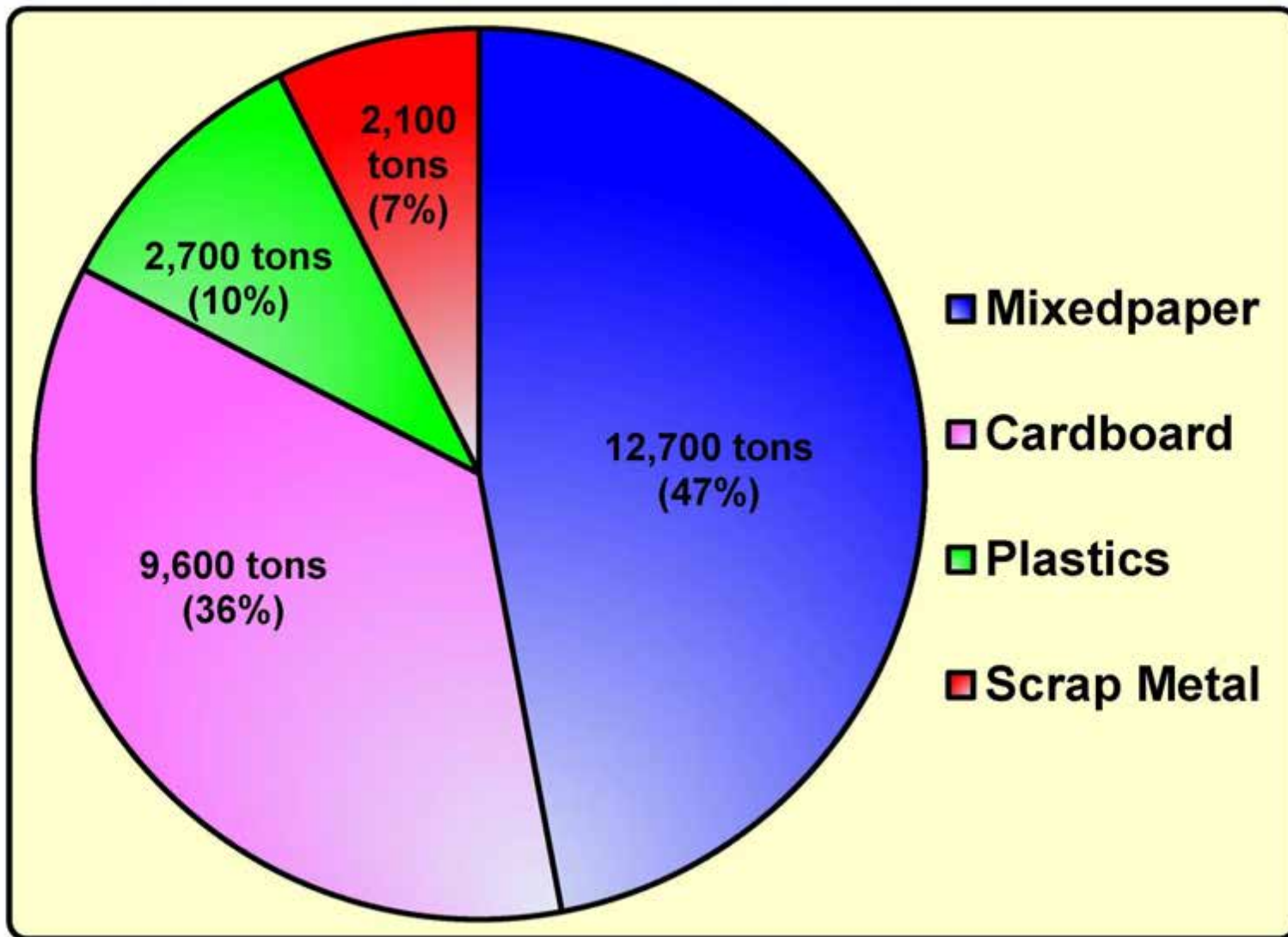


ENGAGED TRADERS / BROKERS

- Produced several batches of test bales of cardboard and mixedpaper for the traders/brokers.
- Conducted visual inspections and performed moisture testing.
- Performed break-bale analysis to ensure we meet 0.5% contamination level.



AMOUNT RECYCLED IN 2017





CLOSING COMMENTS ON THE BAN

- Reduced revenue from commodities.
- Increased labor costs.
- Uncertain future in China and possibly Southeast Asia.
- MRFs must look at new and upcoming technology.

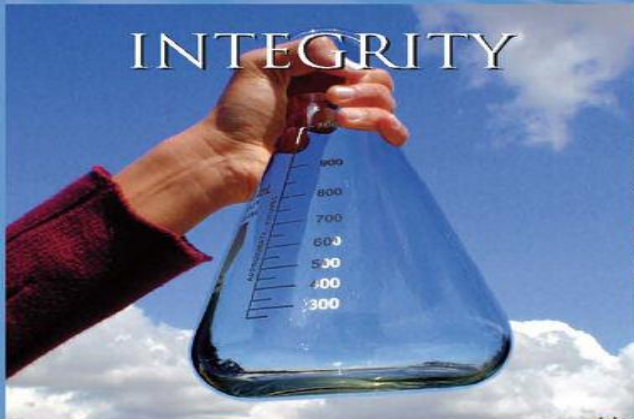


M I S S I O N

SANITATION DISTRICTS OF LOS ANGELES COUNTY

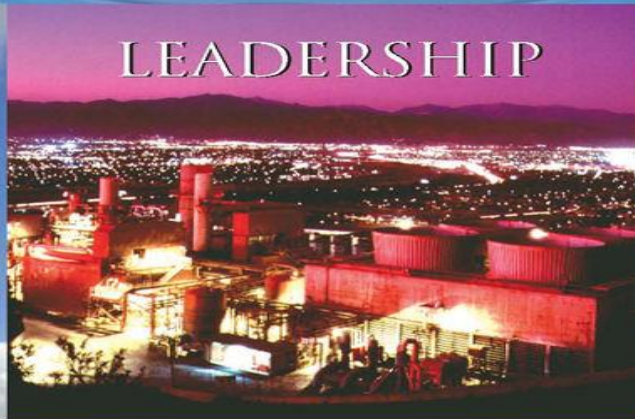
To protect public health and the environment through innovative and cost-effective wastewater and solid waste management, and in doing so convert waste into resources such as recycled water, energy, and recycled materials.

INTEGRITY



We are committed to ethical standards and accountability in our work

LEADERSHIP



We are committed to the advancement of excellence in wastewater and solid waste management

SERVICE



We are committed to reliable, responsive, and courteous service