

Industry Update from the USA: Construction & Demolition Recycling Association

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In partnership with



Welcome

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Materials Handling & Agri-tech

Invest Northern Ireland Americas

Invest Northern Ireland Americas

Materials Handling, Waste & Agri-tech Sector

Export Continuity Support in the Face of COVID-19 Industry Interruption

Industry Updates

- ✿ Sessions with industry experts to provide Northern Ireland manufacturers with updates on the USA, Canada & Latin American markets to assist with export planning and preparation

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Export Continuity Support in the Face of COVID-19 Industry Interruption

Virtual Meet-the-Buyer Programs

- ✿ Ongoing US dealer development support
 - ✿ New-to-market exporters
 - ✿ Market expansion for existing exporters
- ✿ 1:1 support to connect Northern Ireland manufacturers with potential US equipment dealers

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Export Continuity Support in the Face of COVID-19 Industry Interruption

Events & Expos

- ✿ Monitoring the Invest NI 2020-21 Trade Calendar for event cancellations and/or virtual alternatives
 - ✿ Ongoing dealer development/market intelligence support via B2B event platforms
 - ✿ 1:1 support to connect Northern Ireland manufacturers with potential US equipment dealers
 - ✿ Northern Ireland industry promotion campaigns through digital events platforms and marketing support

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Upcoming USA Events & Expos

With planned participation from Invest NI

❁ **Waste Expo Together Online 2020**

10-14 August 2020, virtual, www.wasteexpo.com



❁ **AED Summit**

12-15 January 2021, Las Vegas, www.aednet.org



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Upcoming USA Events & Expos

- ✿ **California Resource Recovery Association (CRRRA) Annual Conference**
16-19 August 2020, www.crra.com
- ✿ **Recycle Colorado Summit for Recycling Conference**
25-26 August 2020, www.recyclecolorado.org
- ✿ **State of Texas Alliance for Recycling Texas Recycling and Composting Summit**
5-7 October 2020, www.recyclingstar.org
- ✿ **American Rental Association**
22-24 February 2021, New Orleans, www.ararental.org

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Things to Note

- ✿ Q&A at the end
- ✿ Submit your questions through the chat box at any time
- ✿ Contact information for Invest NI Americas and CDRA will appear on the final slide, please feel free to contact us.

Construction & Demolition Recycling

William Turley

Executive Director

*Construction & Demolition Recycling Association
(CDRA)*

Construction & Demolition Recycling Association

- 25 years old
- Recognized as the leading expert on the recycling of C&D materials
- About 250 members nationwide
- Most in the United States, a few in Canada
- Mostly privately held companies, seeing more governments joining as they get in business

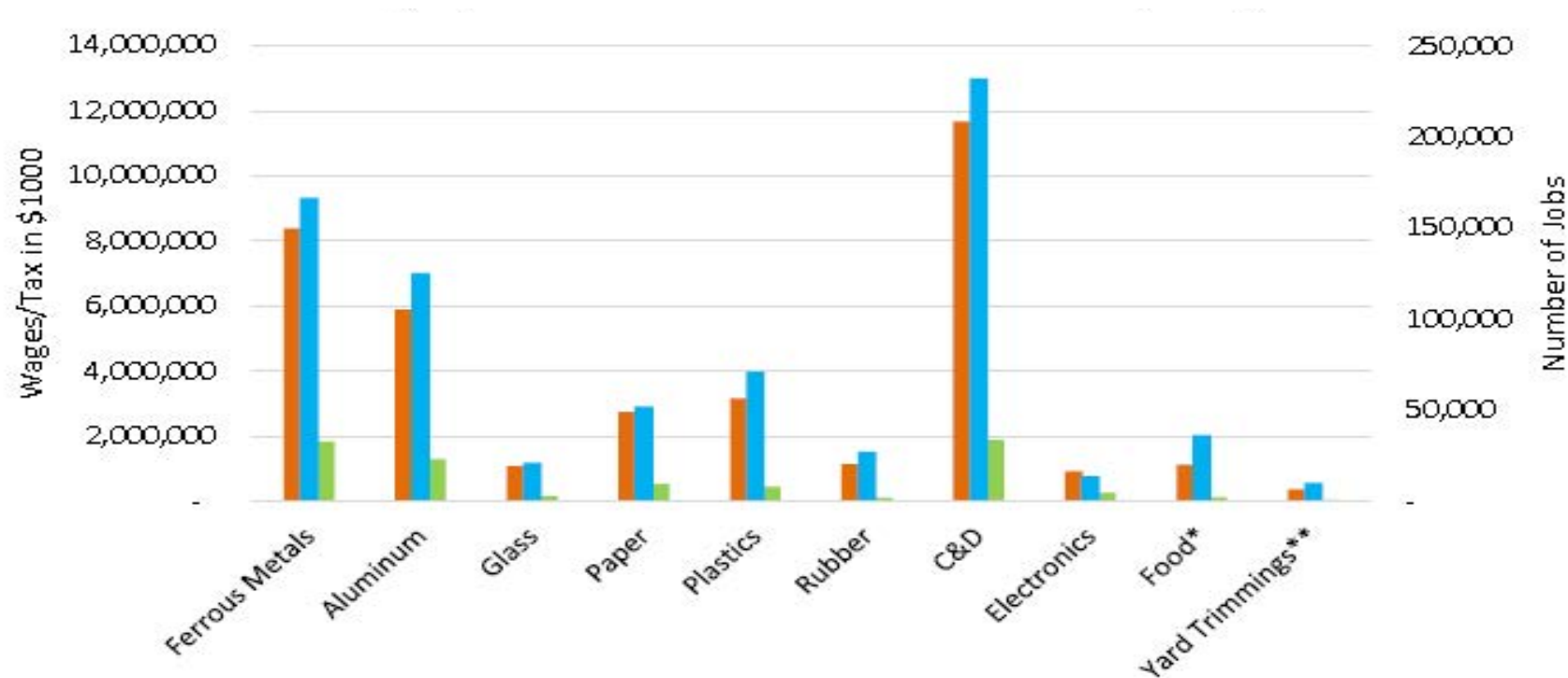
Introduction

- By weight, C&D materials make up the largest material stream in the US: 583 million TPY
 - Concrete/Asphalt
 - Metals
 - Wood
 - Drywall
 - Plastics/OCC
 - Asphalt Shingles
 - C&D Fines

Introduction

- The most recycled waste stream—73% is recycled
- Majority of that are aggregates: concrete and asphalt
- Businesses are overwhelmingly small, privately held companies
- Besides being largest material stream, also contributes the most wages and taxes, and contributes the most jobs of all recycling sectors

Wages, Tax & Jobs Attributable to Recycling



*Food category includes animal feed, meal, meat, fats, oils and tallow, as well as community food service

**Yard Trimmings category includes biodiesel, biogas, compost, mulch and wood chips

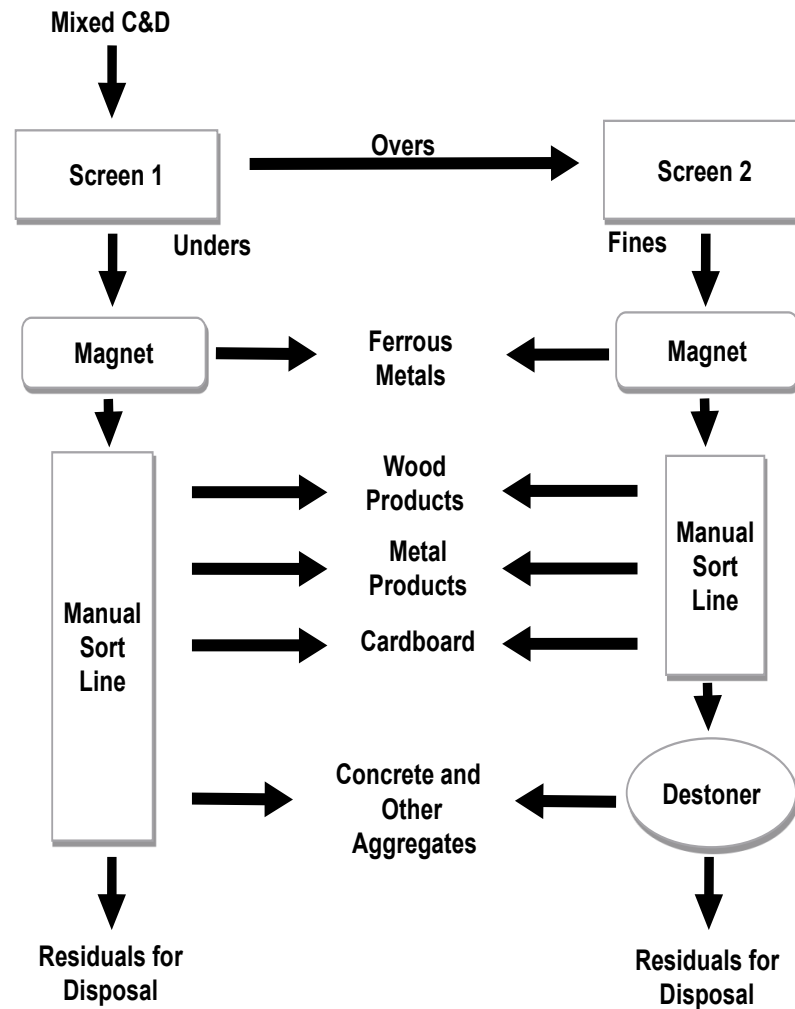
■ Wages (\$1000) ■ Employment (# of jobs) ■ Tax (\$1000)

Two Types of C&D Recycling Facilities

- All highly regulated at the State level
- Concrete/Asphalt



Mixed C&D



Mixed C&D



Mixed C&D



Mixed C&D



Concrete: 395 million tons

- By weight, most generated and most recycled material
- Made of the best rock out of a quarry
- Most common end use is a base, most often for roads
- Pipe bedding
- Concrete aggregate
- Some states limit recycling concrete with paint on it

Asphalt: 83.4 million tons

- Almost all is claimed for recycled
- Only about 30% is allowed back into new asphalt mixes
- Can be used in roadbase
- Concern is petro aromatic hydrocarbons (PAHs)

Metals: 4.35 million tons

- Usually first material recovered
- From concrete, only steel rebar
- Both ferrous and non-ferrous from mixed C&D facilities
- Metal prices are down right now, though a little up from recent historic lows

Wood: 38.6 million tons



Wood: 38.6 million tons

- Largest single component at Mixed C&D operations
- Most important material to find a market for
- Most common end uses are biomass and mulch
- Competes against other fuels, such as natural gas and oil
- Superior fuel because it is dry
- EPA exempted from NHSM rule, recognizing it as a legitimate fuel
- EPA does not allow C&D wood to be used in pellets

Wood Challenges

- Questions on contaminants
- Biomass competing against natural gas
- **C&D derived biomass as a fuel and alternative energy source is recommended because wood is carbon neutral**
 - Wood, as a biogenic source of carbon, takes in carbon dioxide during its growth, making it a carbon-neutral energy source when combusted
 - For greenhouse gas counting purposes, the carbon dioxide emissions from wood are not counted (as compared with non biogenic sources such as fossil fuels)

Drywall: 13.5 million tons

- 37 mm tons consumed, 4.6 million tons imported
- 10 million tons land filled (27%)
- Problem material in landfills—H₂S odors, leachate & gas contamination
- Only permit new unpainted drywall to be recycled
- Difficult to extract from waste stream and process
- Used as soil amendment reducing erosion, sediment, phosphorus and pathogen transport to surface waters (USDA CSP Code 333)
- EU has shown closed loop recycling to be successful. Banned from MSW, C&D landfills. Develop Protocol for handling.

Drywall: 13.5 million tons

- Horizontal grinders often used for size reduction
- Should be processed under roof, incredibly dusty
- OSHA Employee Silica Exposure rule
- Used as soil amendment reducing erosion, sediment, phosphorus and pathogen transport to surface waters (USDA CSP Code 333)
- EU has shown closed loop recycling to be successful. Banned from MSW, C&D landfills.
- CDRA developed protocol for drywall recycling, useful to governments and recyclers.
- Abatement for drywall could be coming.

Asphalt Shingles: 13.5 million tons



Asphalt Shingles: 13.5 million tons

- By far most common end market is hot mix asphalt
- Same bitumen and aggregate used in hot mix
- Low oil prices currently restraining market
- Many states have restrictive testing requirements for asbestos
- Shingles have not been manufactured with asbestos since mid 1970s
- Very abrasive, tough on grinders

Refused-Derived Fuel

- Created from organic fraction
- Wood chips, plastic
- No inerts
- Needs a high heat end market, or one with very strong emission controls.

Refused-Derived Fuel



C&D Fines: 15.1 million tons

- Created by demolition and transportation
- Most challenging to find market
- Common use is alternative daily cover in landfills
- Replaces virgin soil, a beneficial use
- Not often recognized as such
- Fill material, soil stabilization
 - CDRA Studies
 - Quebec

Issues

- We support current contaminant regulations
- Maintain current waste hierarchy
 - Reduce, Reuse, Recycle, Diversion, Landfilling
 - Important for wood fuel, C&D fines
 - Recovering Btu value above landfilling

Future Issues

- Zero Waste Program
- USGBC and LEED
- Support renewable energy credits for C&D biomass
- Recover Act
- Future tied to construction industry
- End market development needed

Future Issues

- Important to many C&D recyclers
- Have to have a minimum amount recycled
- Alternative Daily Cover not counted
- Source separation
- In 4.1, recycling rate certification more important
- Finishing equipment, such as grinders, important

C&D World 2021



**AT&T Conference
Center Austin, TX**

March 21–23, 2021

Registration Opening Soon

C&D World 2021

- 27th year
- Where North American C&D industry gathers
- Smaller, intimate show with only 10 x 8 booths
- Top leadership personnel from attending companies
- Includes a fundraiser and a tour of a local facility
- Recon, which does mixed C&D, concrete/asphalt, and metals, plus has its own roll-off business.

Q&A

Contact Information

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Please feel free to contact us if you are interested in business development work in the Americas, copying in your Invest Northern Ireland Client Executive.

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