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North Country C&D Diversion 2.0 Summit



NORTHEAST RESOURCE RECOVERY ASSOCIATION

Introduction

Today's presentation was
made possible by:
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Feasibility Study #1: Cooperative Crushing of Asphalt, Brick, & Concrete



ABC in the North Country?

Here are your current options:

- ☹️ Don't accept it at your facility
- ☹️ Landfill it with C&D
- ☹️ Store it for crushing & reuse
- ☹️ Store it with hopes for a future solution



Feasibility Study Goals:

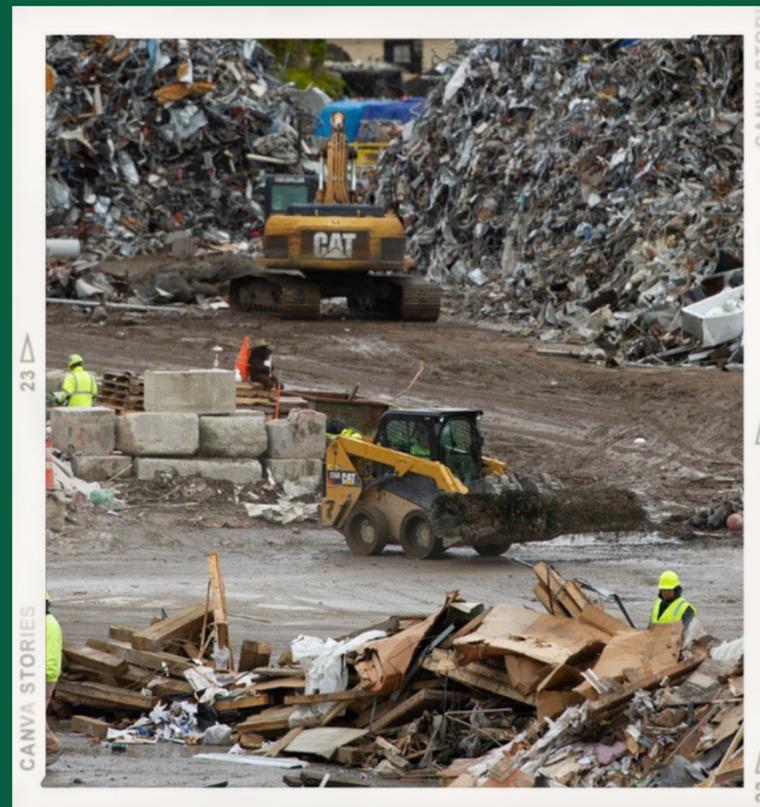
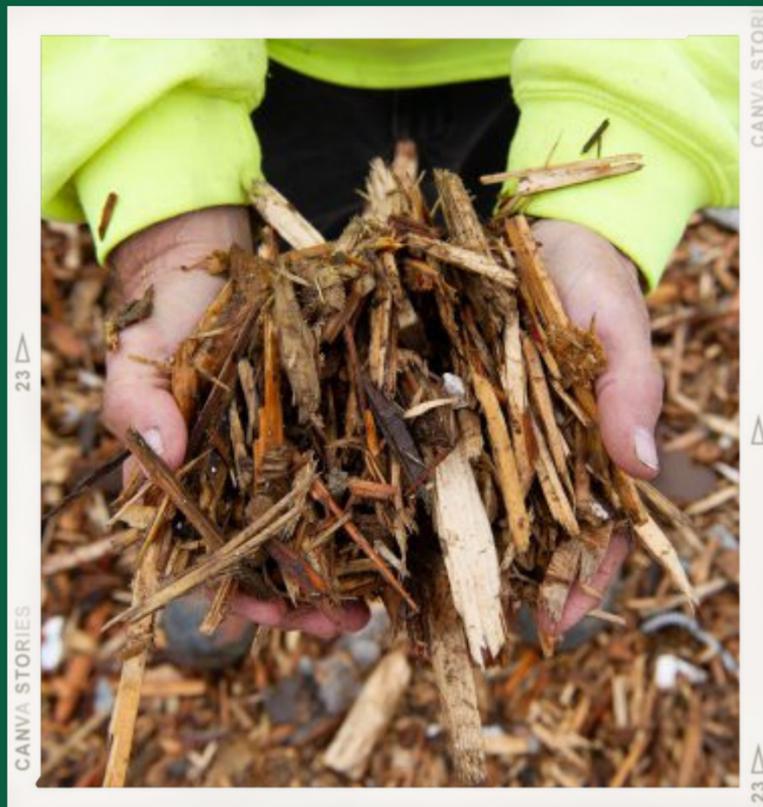
1 Identify Options
for Crushing ABC

2 Find an ABC
Delivery Location



Resource Waste Services

- Epping, NH location
- Delivery Option ONLY
- NRRA Member cost estimate of \$72.74/ton plus haul fee



Commercial Paving & Recycling Co (CPRC)

- **Delivery Option:** NRRA member cost \$50/ton plus haul fee
- **Pick Up Option:** 40 yard container or 100 yard triaxle trailer
 - NRRA member cost: \$50/ton
 - Trucking Fee: \$140/hour

Average Weights:

- *40 yard container is 8-10 tons*
- *100 yard trailer is 20-25 tons*



Cost Example of CPRC Pickup from Littleton

- 40-yd container (8-10 tons)
- Town loads ABC
- Travel 6.5 hours est. x \$140/hour. = \$910
- 9 tons x \$50/ton cost = \$450
- **Estimated Net Cost/Load = \$1,360 or \$151/ton**

AB Excavating in Lancaster, NH

Delivery Option:

- Town can deliver ABC when picking up gravel
- \$65 cost per dump truck load

Potential Pickup Option:

- 100 yd. Triaxle Trailer (16 cy or 24 tons)
- From individual towns, in a "milk-run" (through NRRA), or from a consolidation point
- Hauling fees per hour - site specific



Hauling ABC to a Processing Site

From Tri-Town Transfer Station (Franconia/Easton/Sugar Hill)

- to Resource Waste Services: 4 hours (240 miles)
- to CPRC: 5.5 hours (234 miles)
- to AB Excavating: 2 hours (56 miles)

From Pittsburg Transfer Station

- to Resource Waste Services: 7.5 hours (384 miles)
- to CPRC: 7 hours (290 miles)
- to AB Excavating: 2.5 hours (96 miles)



Final Thoughts & Questions, about ABC Recycling

Feasibility Study #2: Backhauling C&D for Processing and Recycling



C&D in the North Country?

Here are your current options:

Androscogging Valley Regional Refuse
Disposal District (AVRRDD)

Casella's North County Environmental
Services (NCES)

Average Cost: \$150-170/ton



We wondered if
backhauling C&D to
southern NH be an option?



Looked at consolidating C&D at 1 or 2 transfer stations to see if haulers or processors would have enough tonnage to consider backhauling.

Results:

1) Diversion of C&D from landfills by chipping to be used as fuel or crushed into an aggregate to be used as an alternative to crushed gravel.

2) Lowering the number of tons of C&D landfilled to preserve landfill space for material that cannot be reprocessed and reused such as MSW and some components of C&D.

Reached out to 8 processors and haulers

Discussed:

- Service area
- What happens to C&D once processed
- If there was any interest to backhaul C&D



Monadnock Disposal Services (MDS)

- Trailers hold 22-26 tons
- Town would load trailer from C&D storage bunker
- Haul rate \$825 - \$1,025
- Tipping Fee at ReSource Waste is currently \$121/ton



Trial Load to reprocess or reuse up to 80-85% of C&D:

- Tipping Fee: 24 tons x \$121 **\$2,909**
- Haul Fee: **\$ 925**
- Net Cost: \$3,834 divided by 24 tons = **\$160/ton**

Comparative costs for Littleton, NH to bring C&D to landfill:

- Tipping Fee: 7 tons* x \$78 **\$546**
- Haul Fee: **\$521**
- Net Cost: \$1,067 divided by 7 tons = **\$151/ton**

Littleton, NH Example

Potential benefits for backhauling:

- Using MDS, Littleton would have 26 (24 ton) loads/year, compared to current 88 (7 ton) loads/year
- Only on-site separation of C&D would be bulky waste and ABC
- Opportunity to be a regional consolidation point for C&D
- Less carbon footprint with C&D being transported on a backhaul

What if Littleton became a consolidation point in our example?



Lack of Hauler Interest - WHY?

1) Haulers: there is not time to pick up a full trailer of C&D and bring it to a southern NH processor.

2) Processors: must have 3-4 loads/day in 100 yard live-floor trailers to make backhauling of C&D an economically sound endeavor; there is not enough tonnage at one site or at a consolidation site.

3) ME and VT processors cannot accept C&D from NH municipalities due to state regulations.

Cost-Saving Options



- **Densification** of C&D to increase load weights and decrease haul fees
- **Separation** of reuseable items for local or regional reuse
- **Source Separation** of clean wood, shingles, ABC, and mattresses to be handled separately

Additional Recommendations



- **Cover C&D** to keep the weight of rain and snow from adding to the cost per ton.
- **Use a Truck or Floor Scale** to charge accurate disposal fees that help cover C&D tipping and hauling costs.

Thanks, Questions, & Discussion

