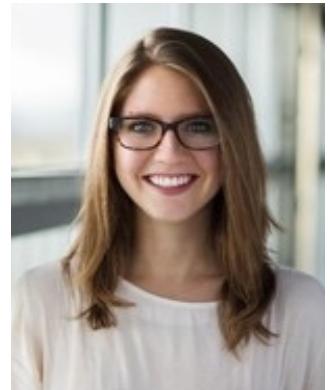




Summit for Recycling & Rocky Mountain Composting Symposium

CONTAMINATION - IS IT SOLVABLE OR NOT? THINKING OUTSIDE OF THE PILE.

CLINTON SANDER, KATHLEEN CARROLL, CHRISTI TURNER, TAYLOR HANSON, JESSICA LALLY



August 23 - 24, 2022 Aurora, Colorado



ORGANICS

are a natural resource.



SOIL = FOOD = HEALTH



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A1 ORGANICS

OVER 48 YEARS IN THE ORGANICS RECYCLING
and SOIL AMENDMENT INDUSTRY

Colorado's first fully permitted Organics
Recycling Facility 1996

Current Facilities: Eaton, Keenesburg,
Commerce City, Englewood

Over 500 acres of processing sites

45 full time employees

30,000,000 gallons of fat, oils, greases, and
liquid food residuals.

425,000 tons per year diverted from
disposal to recycling

410,000 cubic yards of compost, mulch, soil
products sold annually

Colorado Environmental Leadership
Program - Gold Level Partner for 6 years

USCC Composter of the Year

Recycle Colorado: Colorado's Best
Commercial Diversion Program



#KEEP THE STREAM CLEAN

A1
organics

What's driving the cart?

Reuse, Recycle, **Compost**

Zero Waste

Circular Economies

Single Use Plastic Replacement

Fertilizers are not Sustainable

Climate Change

Residential vs Commercial Diversion

Sustainable Diversion Goals

Policy Changes

A1
organics



A close-up photograph of two hands clasped together in a supportive grip. The hands are positioned with fingers spread, and the skin appears slightly moist. A black, textured ring is visible on the ring finger of the hand on the right. The background is a blurred outdoor setting with green grass, trees, and a blue object, possibly a pool, under bright sunlight. The word "WHY?" is overlaid in large, bold, white, sans-serif font across the center of the hands.

WHY?

2020 **A1 ORGANICS** DIVERSION

413,632 TONS of ORGANICS
58% - 239,423 TONS

**5.09 MILLION TONS IN CO₂
Equivalent Avoidance**



1,541,425 CARS
Removed from I-25 annually

GHG AVOIDANCE

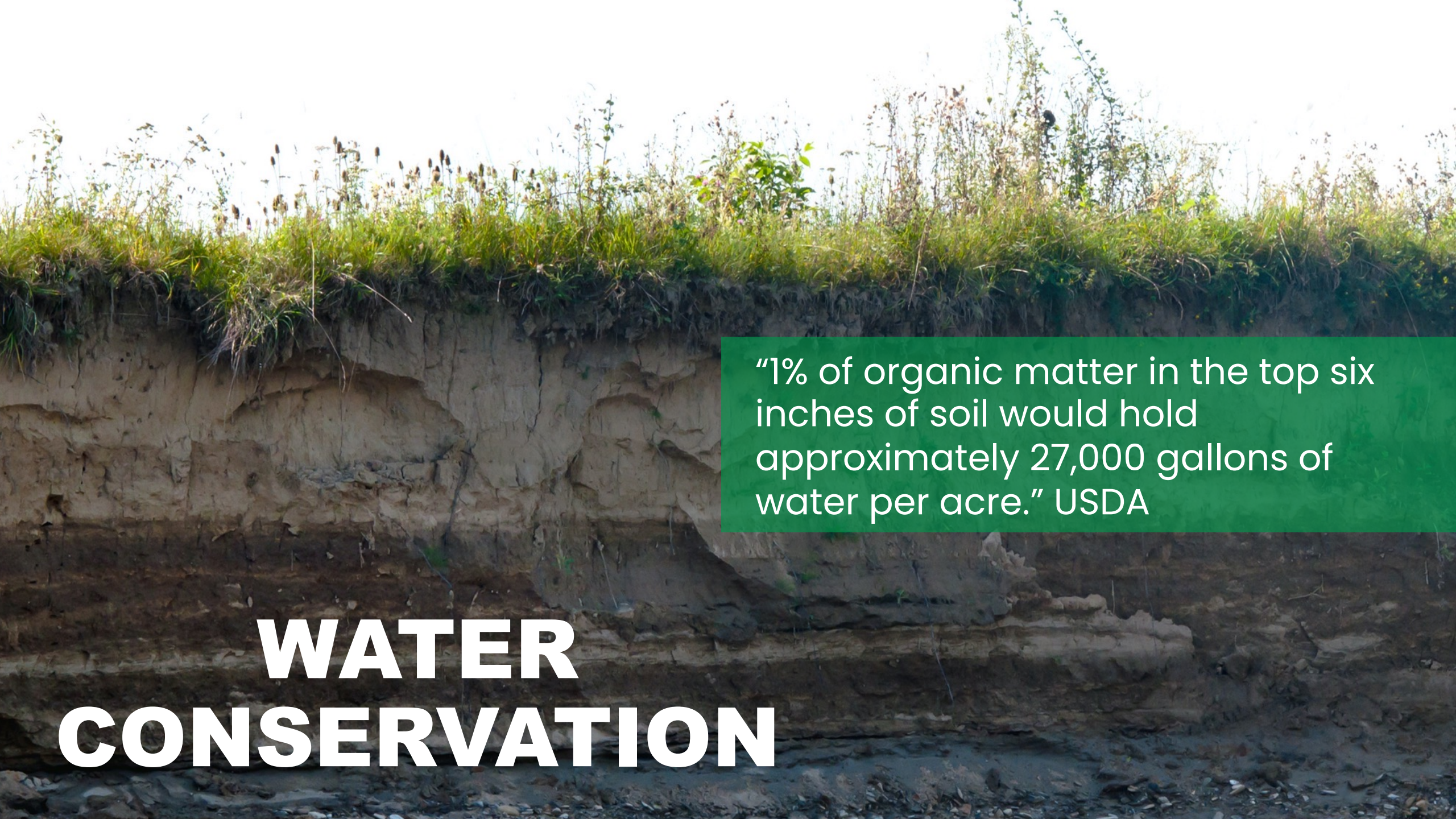
2020 **A1 COMPOST** PRODUCTION

192,425 cubic yards of certified compost
1 cubic yard = 700 pounds CO₂ sequestered

67,348 TONS CARBON SEQUESTERED

CARBON SEQUESTERED





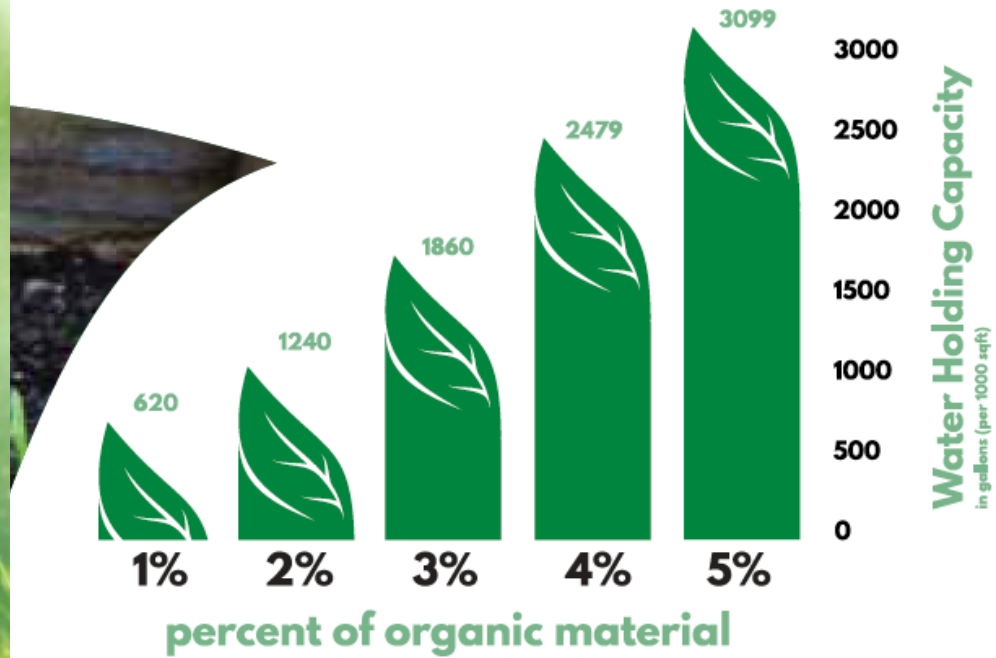
"1% of organic matter in the top six inches of soil would hold approximately 27,000 gallons of water per acre." USDA

WATER CONSERVATION



ORGANIC MATTER

25 – 35% PER CUBIC YARD



Bottom line: how much water you need is directly related to the amount of organic matter present in the soil.

MICROORGANISMS

ONE CUP OF HEALTHY SOIL

CONTAINS:

BACTERIA – 200 BILLION

PROTOZOA – 20 MILLION

FUNGI – 100,000 METERS OF HYPHAE

NEMATODES – 100,000

ARTHROPODS – 50,000





CONTAMINATION IN DIVERTED **ORGANICS** WILL STOP OUR GOAL.



**LOOK
A
LIKES**



**GREEN
WASHING**



**COMPOSTER'S
GOT IT**



COMMON CONTAMINATES



TAGS & TWIST TIES



PACKETS



SHREDDED PAPER



RUBBER GLOVES



GLASS



CUTLERY



PLASTICS



FOOD STICKERS



TRASH BAGS



APPLICATORS



DIAPERS

OTHER CONTAMINATES:

Styrofoam, Non-Compostable Compostables, Metals, Aluminum Foil, Plastic Wrap, Cardboard, Labels, Pet Waste









TV KIT













VALUE PROPOSITION

“**DIRTY**” COMPOST
vs “**CLEAN**” COMPOST







**NEED A LIST OF
CMA APPROVED
PRODUCTS?**



Not all compostable products are the same, they must be lab tested & field tested.
Purchasing CMA Approved compostables ensures both.

A1 Organics New Contamination Policy

- On August 4th, 2022 – A1 Organics started rejecting organic loads with **unmanageable levels of contamination**.
- Continue and Improve Educational programs starting at Pre-K all the way up.
- It's easier to identify & correct contamination at the beginning not at the end. We understand this is a challenge.
 - Inspect at residents, Inspect at tip floor, and Inspect at A1 Organics
 - Simplify what & where you collect – one container all approved compostables / all organics only
 - Control access to organics containers, no front of house collection
 - Have staff separators
 - Make sorting & regular training mandatory
- We are looking at removing contamination, but this is not sustainable solution, it's a band aid.
- Include a Compost Procurement Program in all Diversion Programs
- Multilevel approach from all stakeholders & commitments.
 - Agree to what goes in the cart only throughout the state, require signed commitment
 - Food ware Manufacturers / Distributors – Tailored Catalogs approved by Compost Manufacturer

THE DIRTY DOZEN OF COMPOST

DO NOT COMPOST:



GLASS



PLASTIC



SHREDDED PAPER



PRODUCE TIES, TAGS, & DECALS



GLOVES



PLASTIC BAGS
CERTIFIED COMPOSTABLE BAGS OK

ACCEPTED

Food Waste is a very valuable material in organics recycling composting.

All food accepted: Baked Goods, Bones, Bread, Cereal, Cheese, Coffee Grounds, Dairy Products, Eggs & Eggshells, Fish, Fruits, Gravy & Sauces, Meat, Nuts, Peanut Butter, Pizza, Poultry, Processed Foods, Rice, Salads, Sandwiches, Spoiled or Moldy Food, and Vegetables, Pet Food.

Non-food accepted: Coffee Filters, Teabags, Raw Brown Paper (Crab) Bags, Raw Paper Napkins (Non-coated) and White Paper Towels, Wooden Chopsticks, Wooden Sticks, and Vegetables, Pet Food.

Yard debris accepted: Flowers, Grass Clippings, Houseplants, Leaves, Plant Trimmings, Small Branches (no larger than 4 feet in length and 4 inches in diameter), Weeds, Pine Needles, and Pine Cones.

Compostables accepted: CMA Approved* Products like plastic cups, paper cups, plates, bowls, utensils, & containers.

*Review the APPROVED list on the CMA QR code below.

NOT ACCEPTED

Most important items to keep out of the organics recycling because they cause the biggest contamination issues:

NO grease

NO plastic, food steakers, utensils, styrofoam, plastic-coated paper, T-cups, solo cups, to-go bags, bottles, applicators

NO fast food wrappers, condiment packets, creamer packets, labeled "sterile/sterilized"

NO non-CMA & BPI approved to-go containers & compostable products

NO diapers, sanitary products, and cleaning wipes, domesticated pet waste (for example, cat, dog, or rabbit), horse & livestock manure, and/or other manure and/or waste.

*As the manufacturer of the receiving location, contaminated loads are subject to rejection.

COMMON CONTAMINATES



PAPER WITH LABELS, TAPE, PLASTIC, ETC.



DIAPERS & MENSTRUAL PRODUCTS



POLYSTYRENE FOAM (AKA STYROFOAM)

34 • recycle@ecocycle.org

eco-cycle

NOT ALLOWED - NOT COMPOSTABLE

- X Plastic Bags
- X Plastic Film
- X Food Handler's Gloves
- X Plastic Buckets
- X Plastic Bottles
- X Plastic Dinnerware (forks, spoons, etc.)
- X Styrofoam
- X Plastic Containers
- X Plastic Wrap
- X Glass
- X Metals
- X Aluminum Foil

*At the discretion of the receiving location, contaminated loads are subject to rejection.

Corporate Offices • 16350 WCR 76 • Eaton, CO 80615
Facilities in: Eaton • Keenesburg • Commerce City • Englewood

AIORGANICS.COM 1-800-776-1644

ORGANIC RECYCLING SOLUTION FOR SUSTAINABLE COLORADO



LISTS

- ✓ Noodles
- ✓ Vegetable Oils, Fats or Butter
- ✓ Old Bread and Bagels
- ✓ Onion Skins
- ✓ Peanut Butter
- ✓ Salads & Sandwiches
- ✓ Crate Scrapings
- ✓atoes or Rice
- ✓ Vegetable Peelings
- ✓ Wax Produce Boxes (No tape or stickers)
- ✓ CMA* Approved Compostable
- ✓ Brown Craft Leaf Bags
- ✓ Brown Raw Paper Products



NEED A LIST OF CMA APPROVED PRODUCTS?



SCAN ME

CMA-H LIST

MORE INFO?



SCAN ME



#KEEP**THE**STREAM**CLEAN**



CLINTONSANDER@A1ORGANICS.COM





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Western Disposal Services

- Private hauler serving residential and commercial customers in Boulder and Broomfield Counties
- Own and operate an organics transfer station
- Municipal ordinances require composting

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Municipal Compost Requirements

- City of Boulder implemented residential compost subscription requirement, including food waste, in 2008
- City of Boulder implemented Universal Zero Waste Ordinance in 2016
 - Composting service subscription required for residential rental and commercial property owners in the city of Boulder
 - Composting service imbedded in residential PAYT program
 - Businesses must provide bins, signs and employee training. Front-of-house composting required in self-bussing dining establishments

Composting Communications Resources

- Printed guidelines mailed at the start of service and downloadable from our website
- Waste Wizard 'What Goes Where' web-based app
- Website video
- Newsletter articles, e-blasts, blog and social posts
- Guideline labels inside cart lids
- Laminated signage for businesses (cafeterias, break rooms, restaurant front/back of house)
- On-site education and training for commercial customers
- Diversion reporting for commercial customers
- Organics transfer station tours

Primary Residential Challenges

- Disposables confusion:
 - Absence of labeling standards opens the door for greenwashing
 - Field vs. laboratory compostability
- Compostable materials or items with a commonly co-joined contaminant
- Wish composting

Primary Commercial Challenges

- Disposables confusion:
 - Absence of labeling standards opens the door for greenwashing
 - Field vs. laboratory compostability
- Compostable materials or items with a commonly co-joined contaminant
- Self-bussing dining with non-compostable disposables and front-of-house sorting
- Composting in public bathrooms
- Consistent, ongoing training for staff, employees and contractors
- Many “links in the chain” from point of generation to dumpster
- Green Team fatigue
- Employee or tenant turnover
- Business priorities

Additional Steps Implemented to Reduce Contamination

- Customers notified of contamination issues by mail and email; guidelines and resource links provided
- Increased screening at the generator level; visible contamination screening by the driver (surface only). Material subject to rejection.
- Segregated tipping floor for residential and commercial loads; temporary suspension of commercial material grinding
- Screening and contamination removal on transfer station tipping floor
- Contaminants logged by route to assist in pinpointing the source; frequently able to identify at the customer level
- Sales representatives follow up with direct communication to commercial account
- Re-training and signage offered



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Minimizing Compost Contamination

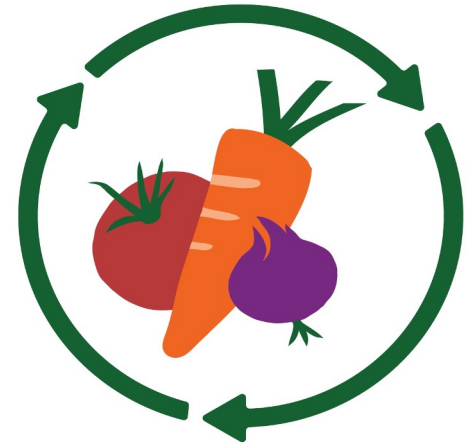


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CBSM model for the slow build, minimizing contamination through education and buy in

- Green Bucket Effect for low residential contamination
- WHY CBSM can help with contamination (consumer based social marketing)
- WHY education effects contamination



What breaks down?

- Working with Compostable Product producers to build a community wide, down/up approach
- Education campaign in Public Private Partnership with the City of Durango
- Acceptance of only those materials that break down





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- Minimal site contamination
- Lessons learned from peers



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REMOVING CARBON FROM THE ATMOSPHERE

WE'RE CARBON FARMING

FIGHTING CLIMATE CHANGE IN OUR OWN BACKYARD

STORING IT SAFELY IN OUR SOILS WITH COMPOST

eco-cycle

TABLE TO FARM COMPOST

Learn more at www.tabletofarmcompost.com

The graphic depicts a farm scene with sunflowers, tomatoes, and a cabbage. A large white arrow points from the sun down to the soil, illustrating the process of carbon sequestration. The text is arranged to highlight the benefits of composting in agriculture.

Why we compost!

- reduce trash creation
- reduce methane emissions
- sequester carbon dioxide
- create healthier soils and encourage agricultural practices

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contamination
small hauler
perspective



Scraps
Christi Turner, founder/ceo
scrapsmilehigh.com



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training & education

- required training for all new commercial Scraps members
- educational materials provided for all Scraps members
- robust library of educational materials for all member types
- individualized / personal / household-level commitment from residential members



custom app, documentation & follow-up

Photos on route

Automated message to members

Personal follow-up for larger/riskier members

Stored & searchable database of incidents

Fwd: Stop Alert: Unacceptable | 08/16/22 - 12:46 PM External



Hello [REDACTED]

We found **non-compostable material** (which we refer to as "contamination") in your compost bin today. Take a look at the attached image to see the contamination we found, and please do not put this material in your compost bin moving forward. If you have any questions about the compostability of an item, please reply to this email or reach out to us at info@scrapsmilehigh.com. You can also visit our website [here](#) to see a list of what we can and cannot accept.

Please note that if we find contamination in your bin at a subsequent pickup, we will charge a \$5 contamination fee to your account.

Thank you!

- the Scraps team



Unacceptable

Stop Details

Order: 36
Route: TUE [REDACTED]
Driver: Toby Duran
Timestamp: Aug. 16, 2022, 12:46 p.m.
Flags: Plastic Bag
Customer: [REDACTED]
Location: [REDACTED] Sheridan Boulevard

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[View Route](#)

[View Customer](#)



residential vs commercial

RESIDENTIAL:

- extremely low incidence of contamination
- easily addressed / solved
- smaller bin size (exception: Edgewater) & less overall volume
- individual / personal / household-level responsibility
- Low fine (never assessed)



COMMERCIAL:

- requires higher level of oversight
- solutions can take time & coordination
- larger bin size (challenging to spot check) & very high volume
- more need / opportunity for signage
- FOH + BOH challenges
- collective / often decentralized responsibility
- more substantial fine (rarely assessed)


key to success: get personal.

More individual-level commitment & responsibility >> less contamination.

Best practices:

- dedicated sustainability/waste role for commercial customers (restaurants, offices, etc.).
- proper composting as part of the job, not an “extra” thing to do.
- custom / store-level signage.

Challenge: maintain high-touch communication with customers through growth.

- 
- Breakdown all boxes and bring to the trash/recycling room in Garage.
 - Do not place recycling down the chute in a plastic bag.
 - Review SCRAPS signage for acceptable items.





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Denver's Compost Roll-out 2023

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Denver's Compost Roll-out 2023

Education needed

- Residents:
 - Print/direct mail – newsletters, postcards, guides provided to all households.
 - Paid advertising – videos, social media campaigns, banner ads.
 - Community engagement and outreach – events, presentations, contracted outreach.
- **Drivers**
 - Required training on what is accepted for recycle/compost

Denver's Compost Roll-out 2023

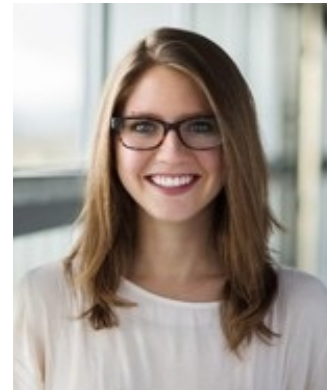
Operational improvements

- Drivers:
 - Tagging carts for contamination, Supervisors follow-up with direct contact/educational materials
 - Cleaning trucks to remove trash
- Transfer Station:
 - Sorting out contamination at the tipping floor
 - Building new tipping floor to account for compost expansion
- Inspectors:
 - Educating on proper cart storage to prevent contamination/illegal dumping
 - Tagging for contamination
- Contamination cameras on trucks – recycling only for now



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THANK YOU, QUESTIONS?



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