

REDUCING CONTAMINATION

Practical strategies from Iowa compost facilities

Keep it out

Pick it out

Screen it out

Measure it



CRLCSWA / Iowa Composting Council
Iowa Recycling and Solid Waste Management Conference
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SolidWaste
Cedar Rapids • Linn County
Agency
living. together. green

Why contamination matters

QUALITY

Cleaner finished compost and stronger customer confidence

COST

Less labor and disposal expense downstream

OPERATIONS

Less equipment risk, downtime and rehandling

RECOVERY

More usable material stays in the compost stream



Once contamination is processed, it becomes harder and more expensive to remove.

We asked Iowa compost facilities

- 1 Cedar Rapids / CRLCSWA
- 2 Iowa City
- 3 Des Moines / Metro Waste Authority
- 4 Davenport
- 5 Cedar Falls



We asked...

- What contamination are you seeing?
- Where do you remove it?
- What tools and technology do you use?
- What has worked?
- What has not worked?

What are we fighting?

Treated lumber /
OSB

Household garbage

Plastic bags

Landscape
materials



Tires / pet-waste
bags

Concrete / brick

Metal

Food Waste
Containers

Film / small
plastics

Different feedstocks. Same recurring problem.

THE #1 LESSON

STOP IT BEFORE YOU PROCESS IT

5 of 5

inspect incoming material

5 of 5

reject contaminated loads



Prevention was the common denominator across every facility surveyed.

Control the gate

DAVENPORT

Every load inspected

Cameras look down into trucks and trailers

Multiple sets of eyes during unloading

Consistent enforcement over decades

IOWA CITY

Scale operator flags suspect loads

Operator meets the driver at the dump site

Contaminated material removed before grinding

CEDAR FALLS

Gate monitoring and prescreening

Loads rejected when unacceptable material is present

Public awareness supports enforcement



“You have to have eyes on the material as it is coming in and being unloaded.”

Education is contamination control

THE BATTLE STARTS BEFORE THE TRUCK ARRIVES

COMMUNITY

Public awareness
Social media
Media outreach

HAULERS

Clear rules
Direct
communication
Consistent
expectations

CUSTOMERS

Accepted-material
guidance
Scale conversations
Feedback



Metro, Iowa City, and Cedar Falls all identified education / outreach as a major strategy.

Sometimes the best technology is people

Every facility surveyed uses people somewhere in its contamination control process.

SEE IT

Operators watch loads



SPREAD IT

Loader exposes hidden material



PICK IT

Hand removal of contaminants



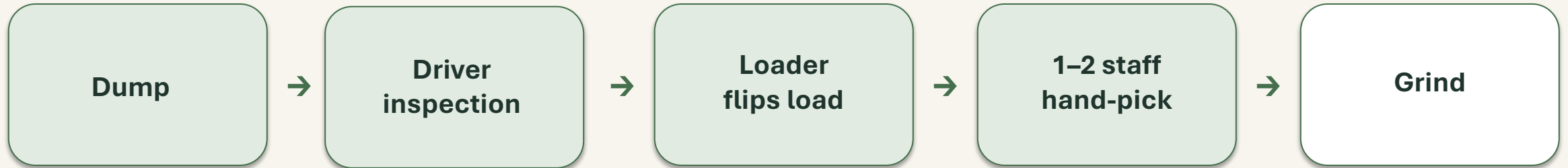
REMOVE IT

Keep it out of the grinder



Manual removal is labor-intensive, but it prevents downstream contamination

Cedar Rapids: catch it immediately



1-2 HOURS / DAY
of focused contamination removal labor

MOST EFFECTIVE STRATEGY

Pick contamination from the load immediately after it is dumped.



CEDAR RAPIDS / CRLCSWA

219 TONS
of contamination removed from
curbside yard-waste trucks
since April 2022



Material that never entered the composting process.

What happens when contamination gets through?

**Front-end inspection catches a lot.
It will never catch everything.**

GRINDER

Magnet captures ferrous metal



SCREEN

Vacuum targets small plastics

MULTIPLE LINES OF DEFENSE

People catch the obvious contamination early. Technology catches smaller material that survives the front end.



CRLCSWA PLASTICS VACUUM

8,100 LBS
of small plastics captured
in the past year
= 4.05 tons





What Iowa facilities told us works

KEEP IT OUT

Education
Gate inspection
Cameras
Rejection

1

PICK IT OUT

Hand sorting
Loader-assisted sorting
Before grinding

2

SCREEN IT OUT

Screens
Magnets
Vacuum / air separation

3

MEASURE IT

Track removal
Find trends
Show improvement

4



What doesn't work by itself?

**A FEE DOESN'T
NECESSARILY
CHANGE BEHAVIOR**



CEDAR RAPIDS EXPERIENCE

Fining haulers alone was not enough.

The fee is simply passed along to the customer without changing what arrives at the facility moving forward.

Fees still have a role, but they work better as part of a broader system.



Inspection + Education + Enforcement + Removal + Technology

There is no silver bullet



Contamination reduction is a system, not a single machine or policy.

FIVE THINGS YOU CAN DO TOMORROW

- 01** Put eyes on every load you can.
- 02** Catch contamination before grinding.
- 03** Create multiple removal points.
- 04** Talk to haulers and customers.
- 05** Start measuring what you remove.



Questions / Discussion

Iowa is doing
cool things!



Questions?



Reducing
Contamination