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What is Recycling Contamination, and Why Does it Matter?

If your business recycles, there's a good chance that you're familiar with the term "recycling contamination". But what is recycling contamination, and why does it matter? How does it impact your sustainability efforts? And how can we prevent recycling contamination?

As it turns out, the problem of contamination can easily be reduced. Here is everything you need to understand recycling contamination facts, common

contaminants, and how you can help make move our planet toward a more circular economy.

What is Recycling Contamination?

Recycling contamination occurs when materials are sorted into the wrong recycling bin (placing a glass bottle into a mixed paper recycling bin for example), or when materials are not properly cleaned, such as when food residue remains on a plastic yogurt container. This is sometimes referred to as **aspirational recycling**, as you're simply throwing something into the recycling on the hope that it will find its way to where it needs to be eventually. Unfortunately, this is rarely the case.

For instance, if you are collecting a material for recycling, anything other than that specific material could be **considered a contaminant**. When disposed of improperly (ex: in the wrong recycling container), even recyclable materials, such as plastic and other paper products, can act as contaminants. The challenges of **recycling after a natural disaster** point to an extreme form of contamination.

For example, if someone throws plastic into an **OCC (cardboard)** stream, this would be considered recycling contamination. Because of its incorrect disposal, there's a strong possibility it's rejected and sent to the landfill, resulting in a wasted recycling effort altogether. The only time it is okay to "comingle" or mix recyclables together is when you have an agreement to do so with your recycling service provider. It's worth noting that recyclables that contain residues such as food waste, oil, and grease (unless stated otherwise by your recycling company) are considered contaminants and should not be added to your recycling stream.

Types of Recycling Contamination



Contaminants turn your recycling into nothing more than trash. There are many types of recycling contamination, including plastic, food waste, and more. **Some contaminants are worse than others** and most are easily avoidable, as you can see from the following list of recycling contamination statistics:

#1 Contaminant: Plastic Bags

Plastic bags and items made from their plastic material (i.e. shrink wrap, bubble wrap, Ziploc bags, newspaper bags, trash bags, etc.) are the worst recycling contaminator of all.

Keep them out of the bin to save the sorters at your local recycling facility a huge amount of extra removal work while also saving their machines the hassle of getting clogged.

#2 Contaminant: Food Waste

Otherwise recyclable items quickly become garbage when they carry the remnants of the food that they once held.

Some great examples of food waste contamination can be found in paperboard take-home boxes full of food and the recyclable jar/can that hasn't been emptied or rinsed out.

It may *seem* environmentally sound, but paperboard that's used to carry food usually heads to the landfill. The same can be said for food waste left in recyclable jars and cans – one notable exception is a well-scraped peanut butter jar.

#3 Contaminant: Loose Shredded-Paper

The most valuable trait of recyclable paper is its long paper fiber. This is because long fibers can stand up to multiple recycling cycles. While shredded-paper is not a considered a contaminant as a whole, loose shredded paper can cause many recycling issues.

When shredded-paper is mixed in with non-shredded paper, it is difficult to recover for recycling at a [materials recovery facility \(MRF\)](#). The problem is with the small pieces. To fix this, people who want to recycle their shredded-paper can simply keep it in a clear plastic bag that can then be kept with their other recyclable items.

#4 Contaminant: Brightly Colored Paper

Dan Baril, recycling program manager at the University of Colorado at Boulder, explained the problem with brightly colored paper well when he made the analogy of the red-sock-in-the-white-load. That paints a pretty good picture of what happens when brightly colored paper manages to spoil a batch of good paper recycling.

If the thought of not recycling your colorful paper items crushes you, there may still be a way...

If you tear the colored paper in question and you see white in the center it is recyclable. If the color dye goes all the way through then you're unfortunately out of luck.

#5 Contaminant: Some Beverage Cartons

Some municipal programs accept beverage cartons as recyclable while others might not. When in doubt you have two options: (1) Check with your specific municipal recycling program's manager to find out if cartons are on their 'yes' or 'no' list. (2) Add the cartons to your single stream recyclables since they are easy to separate out

Regardless of the route you choose, make sure to keep the tops and lids on the cartons.

#6 Contaminant: The Wrong Plastics

Some recycling program might accept plastics #1-7 but the final rejection is decided at the sorting facility. Rejection of plastics usually comes down to the type of the plastic being recycled and what it once contained. Food containers are usually okay.

Containers that once held non-food items should be checked to determine the type of plastic it's considered.

For instance, the most commonly recycled plastics are #1 – PET and #2 HDPE. Plastics #3 through #7 are sometimes recyclable.

To see if your item is one of the above mentioned locate the chasing arrows symbol. If you see a #1, #2, or #3 through #7 you should be good to recycle, just make sure that the item is completely empty or rinsed with the tops and lids on.

This is another time where checking with your specific municipal recycling program's manager would be greatly beneficial.

#7 Contaminant: Hazardous Waste

Containers for paint, automotive fluids, or pesticides must be disposed of separately or, for some facilities, cleaned out before they can be recycled. Check with your local recycling and/or household hazardous waste program manager to determine the methods necessary to make sure these items can be recycled.

#8 Contaminant: Bio-Hazardous Waste (and Diapers)

If you are trying to recycle something that has any human fluid on it don't. Syringes, needles, diapers, and any other sanitary product are not recyclable and can be potentially dangerous to handle.

#9 Contaminant: Frozen Food Containers

Though it is really tempting to put that paperboard box from the freezer in the recycling bin, *don't* do it. The shiny, exterior-coating that those boxes have to prevent freezer burn actually prevents the paper from being recyclable.

#10 Contaminant: Unrinsed or Metal-Capped Glass

Before you recycle that wine or beer bottle, give it a quick rinse. The excess liquid can contaminate other papers in the recycling and render them non-recyclable. Metal caps on glass containers simply need to be put into the bin separately from the containers that they top.

Why Recycling Contamination Matters

So, why does this information matter for the future of recycling? Why is recycling contamination important? Let's take a [closer look at the harm](#) that contaminants can do.

Recycling Becomes Impossible

When the occurrence of contaminants in a load of recycling becomes too great the items will be sent to the landfill even though some of them are viable for recycling. This happens because recycling is a business. If extra costs add up simply to separate out the contamination, it is likely that a use for that money will be found elsewhere.

Recycling Machinery Maintenance

Plastic bags, as mentioned, can wrap around the shafts and axles of a sorting machine and endanger the sorters who have to remove them. When the machine breaks and the sorters have to dig them out, that is time and

energy wasted.

Unsafe Work Environments for Those Sorting Your Stuff

When improper, non-recyclable items contaminate the sorting bins, recycling workers can be exposed to hazardous waste, vector-borne diseases (living organisms that can transmit infectious diseases between humans or from animals to humans), and other physically damaging items.

Devaluation

The paper, cardboard, plastic, and metal commodities in your recycling have value aside from benefitting the planet. If a contaminant is present, the quality of the recyclable is reduced or eliminated. This gives recycling less market value, and the local recycling program may suffer as a result. Ultimately, this could result in an increased cost of service.

Damaged Recycling Relationship

When you combine the above-mentioned issues, a recycling facility can begin to get weary. When this happens, it is not uncommon for these facilities to refuse service to repeat offenders. That means that all the otherwise recyclable goods (that could be used again!) will end up in the landfill.

Recycling Contamination Statistics and Prevention

Luckily, we're not all doomed to contaminated recyclables. The three steps that will put you on the road to preventing recycling **contamination** are:

1. Over-Communicate

The best way to solve most problems is through communication, and that should include your recycling provider. Research or reach out to your provider to establish the best way to prepare your recycling according to your provider's needs.

2. Keep Them Separated

Many communities have what is called *Single Stream Recycling*. That means sorting on your end is unnecessary. For the rest of us, a little extra effort is required. To cut down the occurrence of contaminants, try labeling each recycling container with what can be recycled and what cannot. Pictures are always helpful if you want to take the extra step.

3. Keep it Clean

Remember that there are hardworking people sorting the items you are recycling. Without them, these items would just be trash.

For example, before you recycle that plastic to-go container with food remnants, think of the person that will have to handle that messy container in a week. Not only is it gross, it's not ideal as a recyclable material. Give containers a quick scrape to ensure you've removed any excess food.

Doing these three things will make the recycling process more efficient and you will increase the value of what you send to your local facility. With your newfound knowledge of contaminants, you can help save the planet. The next time you make that trip to the recycle bin, ask yourself – have you helped prevent contaminants?

David Rachelson is Vice President of Sustainability at Rubicon Global. To stay ahead of Rubicon Global's announcements of new partnerships and collaborations around the world, be sure to follow us on [LinkedIn](#), [Facebook](#), and [Twitter](#), or subscribe to our [RSS](#) feed.

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