

**Waste Management**  
**Yard Waste Cart Contamination Study**  
**Report**

Research Conducted November 2017

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## Introduction/Methodology

This report summarizes the results of the asynchronous online focus group study that was conducted by Hardwick Research on behalf of C+C and their client, Waste Management.

### Research Goals

This study was conducted online with residents of unincorporated King County who are customers of Waste Management. The online interviews were conducted in November 2017 as a means to gather feedback from Waste Management customers regarding their yard waste service, including usage patterns and understanding of the guidelines of what is allowed in yard waste. In addition, various collateral pieces and messaging were evaluated.

Objectives of the research were to understand:

- What residents are placing in their yard waste cart
- Whether or not they place food scraps in their yard waste cart
- Awareness of what is allowed and not allowed in the yard waste cart
- Effectiveness of images used in communications regarding yard waste guidelines
- Value of various communication pieces provided as part of the yard waste service
- Opinions regarding potential messages aimed at improving compliance with yard waste guidelines

### Research Process

Asynchronous online discussion groups were conducted with 28 Waste Management customers. The discussions were conducted in a one-on-one format rather than as a group, meaning participants could not see each other's responses.

Participants were recruited from areas of unincorporated King County that are served by Waste Management.

In order to qualify to be interviewed, a resident must:

- Have curbside yard waste service with Waste Management
- Place material in their yard waste cart every other week or more often
- Be the person in their household who is responsible (or share the responsibility 50:50) for the placing items in the yard waste cart and taking it to the curb
- Be at least 18 years old

The focus groups ran for a week, and were moderated by Nancy Hardwick. Participants received a \$100 VISA gift card as a thank you for their feedback.

## Summary of Results

After spending five days chatting with participants about their yard waste service and composting behaviors, a key learning emerged. Keeping in mind that those who participated in this study have at least had some interest in composting, since they have yard waste service and were willing to participate in the research, there appears to be two general types of curbside composters – the Savvy Composter and the Convenience Composter. Each type of composter has a different outlook on curbside composting and although they are interested in learning different things, both have similar requests when it comes to educational information.

### A Tale of Two Composters

As a means comparing and contrasting these two different types of composters, we have developed a story framework to help the reader better understand the mindset of these composters.

	Savvy Composter	Convenience Composter
<b>Background Knowledge</b>	<ul style="list-style-type: none"> <li>-Fairly well-informed on guidelines</li> <li>-Understands the importance of composting and does best to comply</li> <li>-Understands the compost lifecycle and that the end product is used in gardens and farms</li> <li>-Cart goes to the curb every week all year round</li> </ul>	<ul style="list-style-type: none"> <li>-Knows that yard waste can go in the bin, maybe a few fruit/veg scraps</li> <li>-Has yard waste service because they think it's mandatory, but doesn't mind because putting yard waste in the cart is more convenient and probably good for the environment.</li> <li>-Knows that compost goes somewhere and just hopes it is reused</li> <li>-Cart goes out to the curb every week except in winter when yard maintenance is reduced</li> </ul>
<b>Yard Habits</b>	<ul style="list-style-type: none"> <li>-Puts grass clippings, branches, garden debris and pruning into yard waste.</li> <li>-Buys compost at local garden center to use in own yard and garden</li> <li>-Bags dog poop, goes into garbage</li> </ul>	<ul style="list-style-type: none"> <li>-Puts grass clippings and some branches into yard waste (along with the occasional 2x4) and some pruning.</li> <li>-Goes around the yard picking up dog poop and tosses that in too.</li> <li>-Does not buy compost to use at home</li> </ul>
<b>Kitchen Habits</b>	<ul style="list-style-type: none"> <li>-All food scraps go into compost including cleaning out the fridge of old food</li> </ul>	<ul style="list-style-type: none"> <li>-Almost no food scraps go into compost, maybe the occasional trimmings from fruit or vegetable prep</li> </ul>
<b>Organization</b>	<ul style="list-style-type: none"> <li>-Composting bin on counter or under sink, emptied into the outdoor cart several times a week if not daily</li> </ul>	<ul style="list-style-type: none"> <li>-No composting bin, no good place to put one because kitchen is crowded</li> </ul>

<b>Concerns</b>	<ul style="list-style-type: none"> <li>-Wants to know the rationale for guidelines/changes to the guidelines</li> <li>-Thinks others would be more motivated to compost if they knew more about the process</li> </ul>	<ul style="list-style-type: none"> <li>-Worried about smells and the dog getting into a bin if had one in the house, rodents getting into the bins outside</li> <li>Interested in knowing the rules, but if it takes too much time to figure them out won't bother</li> <li>-Mildly interested in knowing the compost lifecycle and thinks it's cool when learns that compost is used on farms (but that is not enough to incent better habits)</li> </ul>
<b>Problem Areas</b>	<ul style="list-style-type: none"> <li>-None – has a good sense of the guidelines and follows them</li> </ul>	<ul style="list-style-type: none"> <li>-Unable to tell the difference between which paper or plastic items are compostable vs. not, doesn't want to spend time to figure it out</li> <li>-Doesn't want to figure out how to make food composting work at home</li> </ul>
<b>Use of Communications</b>	<ul style="list-style-type: none"> <li>-Likes to have multiple types of information available (quick guides, detailed guides, and educational information) and takes the time to read it, looks up anything that they are unsure of</li> </ul>	<ul style="list-style-type: none"> <li>-In theory, likes to know that information is available if wants it. Glances at the brochures that come in the mail and tosses them. Occasionally goes online to look things up but only if has time. (Makes best guess of which bin to put things in.)</li> <li>-Won't make time to read educational materials</li> </ul>
<b>Type of Ad Preferred</b>	<ul style="list-style-type: none"> <li>-Likes to see interesting imagery like the Curbside Composting ad, but finds the Food Cycle ad more informative.</li> <li>-Will make time to read through the text. Interested to learn about plastics ending up in soil, and makes connection to oceans and how plastic contaminates everything around us.</li> <li>-Wants to see more clear imagery for the benefit of others' understanding, to get more people on board.</li> </ul>	<ul style="list-style-type: none"> <li>-Prefers more graphic imagery that transmits an idea immediately for example if the broken glass image had a bloody finger by it, or a red X through it.</li> <li>-Would like to have the image clearly convey which cart the ad is referring to. Not willing to read the text, might skim it.</li> </ul>

## Recommendations and Strategic Implications

### Yard Waste Contamination Issues

- **Messaging around keeping glass out of yard waste carts does not require much explanation.**

Be aware that all participants know that glass needs to be placed in the recycling cart. Although glass may be finding its way into yard waste, participants understand that it does not belong there. A simple image of glass with a red “X” over it is a clear enough message to let participants know glass should not be placed in the yard waste cart.

It’s interesting that glass is showing up in yard waste carts as not a single participant thought glass should be placed there. Consider positioning glass as something that is easily recyclable with the message that glass belongs in the recycle cart.

- **Plastics will be a bit more challenging.**

Since plastic contamination is an issue in yard waste, additional education is needed. Participants agree that plastic should not be included in the yard waste/compost cart, and some were surprised to learn that plastic is the primary contaminant.

Participants do not understand how plastics are getting into the yard waste cart. Providing examples of the type of plastics that are “sneaking” past residents is critical. Based on the sorting exercise conducted during the research, items like produce bags, produce stickers, and pet waste bags are incorrectly being placed in yard waste by up to 25% of participants.

Since we know factually that plastic is the most common contaminant from composting facilities themselves, this suggests that the plastic people are putting in is accidental or they think it is compostable when it is not.

Educational opportunities for handling plastic include:

- How do you know if a plastic item is compostable
- Plastic items can be sorted into yard waste, recycle or garbage, how do you determine which cart to place it in
  - Numbers in triangle on the bottom vs shape of item
  - Plastic coated vs non-coated
  - Containers that once stored toxic cleaners
  - Different rules based on the town/community you live in
- Messaging centered on why compliance is important was motivational to participants

- **Consider renaming the service “compost” instead of “yard waste”**

Some customers are still confused about sorting food scraps into compost, and which food scraps can go in. Additionally, many participants were excited that the yard waste becomes the compost they buy for their yards, and that is used on farms. Calling the service “compost” will reinforce that a broad range of products that are accepted into the cart, and also infers that the waste is actually composted.

- **Figure out how to help people with unique barriers to composting (limited space, bears, rodents, pets) achieve success. Provide either suggestions or actual supplies that would alleviate their concerns. Perhaps a site or neighborhood visit could be offered for unusual situations.**

A few participants were unwilling to compost because of space constraints in their kitchens or lack of protected outside storage. Others were concerned that their dog would get into the compost because the bin was not inside a cabinet, or that bears or rodents would get into the compost once it was outside.

- **Consider a communication blitz on pet waste concerns aimed at educating residents on the guidelines and the reasons why. Coverage should include dog, cat, chicken and rodent waste, including cage bedding.**

Pet waste is an issue. Many participants believed that this was the biggest contaminant in yard waste, followed by plastic. Composting facilities may not realize it, as pet waste is not as easy to spot as other contaminants. However, based on participant feedback, there is a lot of pet waste being disposed of in yard waste carts.

There was a lot of confusion around pet waste guidelines. Most participants consider it organic and therefore compostable. Additionally, some participants believed that the high heat used in industrial composting would kill off any pathogens. They did not see the difference between that and raw meats with their E. coli and salmonella contamination risk.

Realistically the inclusion of pet waste in yard waste carts may not be an issue for the composting facility, rather it’s considered a Department of Health concern. Based on this it may not be a relevant issue.



ad should reinforce one key message and the text and images must align with that. Otherwise customers will be confused and many will not be willing to take the time to figure it out.

- **Rework the print ads to include aspects from each execution. These changes should include placing a red X through any incorrect choices (glass and plastic meet the brief for these ads), using the cycle of composting imagery, reducing the amount of text above the image and making what text is used below the image larger.**

Each of these addresses concerns or suggestions from participants, since many liked parts of each ad. They wanted stronger visual cues indicating what action was required. For example Execution H needed a large red X over the broken glass to indicate it should not be included. The cycle of composting image (Execution N) seemed strongest in reinforcing the message of the compost ending up in farms and gardens and ultimately food. The wreath (Execution T) and the yard waste can (Execution L) images ads had their fans too and could be considered as well.

- **Continue to provide information in multiple formats including cart tags, guides, brochures, and on the website. Vary the level of detail provided. Additionally consider including a piece that emphasizes what not to place in the yard waste, focusing on the items causing the most problems. Cart tags could be a spot for that information, especially if provided for the indoor bins as well.**

Different participants preferred different formats and levels of detail based on what they needed at the moment, or their confidence regarding sorting decisions. In spite of several comments about cart tags not being very useful because they were outside, participants still indicated an interest in having them.

- **Create advertising that would address compliance with plastic and glass guidelines in one set of ads, and the idea that what is in the compost will end up in your food as another. Consider an educational series of ads on the guidelines first, followed by the effect of noncompliance.**

The food cycle concept (Execution N) resonated with participants and should be considered separately from or as a follow up to the plastic/glass sorting compliance concept. Education on the guidelines is key to higher rates of compliance. However, participants were interested in the idea of a complete food cycle, and some were concerned about the effect of plastic contamination on their food. However, in the ads that focused on the food cycle (Execution T and Execution N), the message of keeping plastic and glass out of the yard waste and related call to action were diluted.

- **Provide feel-good justifications for following the guidelines.**

Participants want to see more information about the positive impacts of their trash sorting efforts, saying they found it motivational. Examples they gave were cost-benefit of sorting correctly versus not (both in terms of lost raw material due to contamination, and the lost revenue or other measure of putting it in the garbage) and statistics on how much waste is diverted from landfills.

- **Information on composting should come from Waste Management or the composting facility such as Cedar Grove.**

When asked what source they would prefer to receive information on composting from, these were preferred. Least preferred were workers at a compost facility and King County.

### **Recycling and Composting Guidance**

- **Educate consumers about the decision process for sorting paper and plastics. Create an algorithm to help them visualize the differences. Provide explanations of why each decision factor matters.**

There is a lot of confusion around the various paper and plastic types and where they should be sorted. These are items that depending on their shape, material, or cleanliness, could go in any of the three bins – yard waste, recycling or garbage. The few participants who sorted plastic into compost may have thought it was compostable. The concept that the plastic ends up in soil resonated with participants and should be highlighted.

- **Explain changing guidelines including why they have changed, and revisit the topic periodically. Consider developing an informational timeline for the website that would indicate when and why key changes took place.**

Over time, sorting guidelines change versus what used to be true at a customer's current residence or versus a previous residence. They do not seem to understand that each municipality develops their own agreements with the waste companies. They struggle with understanding and remembering changing guidelines. Examples given were the plastic numbering versus current emphasis on shapes, which food items are compostable, which types of metals can be recycled, etc. Most people want to comply with the guidelines but are habituated to a certain way, or don't understand the rationale for the change. Understanding if it's due to a new technology, lack of demand for a type of resin, or other reason, would go a long way to helping them recall the guidelines and increase compliance. Additionally understanding just how long it's been since some of these changes took place might help cement the idea in their minds, in addition to being interesting to learn.

- **In addition to the current information about sorting guidelines, provide a default choice for when the residents don't know where to place an item.**

When some participants were unable to recall current guidelines or where complying was inconvenient they often placed the item in question into their best guess cart. Often that best guess was incorrect and would ultimately result in a contaminated load. If garbage is the best choice in these situations, participants would like to know that.

An explanation should be provided regarding why an occasional item is better off in garbage rather than placing it in the wrong cart and potentially contaminating a full load. Emphasize expense and environmental impact.

## Detailed Findings

### Day 1

#### **Reason Have Yard Waste Service**

The primary reason most customers had yard waste service was because it was a convenient way to dispose of actual yard waste – leaves, branches, grass, etc. About half of the customers also used it to dispose of food waste. A few mentioned that they believed subscribing to the service was required.

Most said the reason for continuing the service was because they had a lot of yard waste to dispose of and the process was convenient and environmentally friendly. Some elaborated that they felt it was economical, or helped to reduce rats and mice that enjoyed in-yard compost piles. One also mentioned easier yard clean up after bear damage to trees.

#### **All about the Cart**

Customers placed materials from their yard and garden maintenance such as grass clippings, twigs/branches, leaves, spoiled produce, and weeds into their cart. They also placed some food waste in, with most mentioning fruit, vegetables, bread, egg shells, and the like. Some also itemized some paper products like pizza boxes, cardboard boxes, paper, and shredded paper. A few mentioned pet waste and meat/bones.

About a third of participants called their yard waste cart “yard waste.” About a quarter used “yard waste bin” or “compost bin. A few used “grey bin” or “yard waste cart.”

Almost all participants put their carts out for pick up on a weekly basis. A few did it every other week. Some have reduced frequency in the winter months.

#### **Food Scraps**

When asked specifically about food scraps, about a third of respondents placed all their food scraps in the yard waste. Another third placed at least some of their food scraps into their yard waste but also placed some in the garbage, depending on the item or their habits. About a third placed food scraps only in the garbage. A few mentioned using their garbage disposal to dispose of food scraps.

The amount of food scraps being composted varied. Paper grocery bags were used as a way to measure the amount of food scraps ending up in the yard waste cart. The number of estimated paper grocery bags full ranged widely. In general, about half placed  $\frac{3}{4}$  to  $1\frac{1}{2}$  bags of food waste out each week. A few had 2-4 bags per week. Some did not put any food scraps in their yard waste cart.

### **Where Does It All Go?**

More than half of participants knew that their yard waste was processed into compost and sold for reuse as fertilizer, with a few of them having a detailed understanding of the process.

About a third had no idea what happens.

Nearly all felt it was important to know how their yard waste was used. Even most of those who originally said it wasn't then qualified that answer by saying it better be being reused, indicating a level of importance to them.

### **Using Compost at Home**

Many of the participants have bought compost to use on their property as a soil amendment or on lawns, landscaping, and flower and vegetable gardens. A few mentioned container gardening as another place they used the compost. Most of them purchased it through hardware stores and nurseries, with a few getting it through a composting facility.

### **Image Recognition and Sorting**

Participants were shown unlabeled images of various items that they would typically need to dispose of and asked to sort them as they would at home. If they couldn't tell what an image was, they could set it aside.

This sorting exercise uncovered some items that participants were disposing of incorrectly (placing in the wrong cart). Specifically, items of highest concern are listed below.

Top items that were contaminating yard waste include:

- Coffee cups
- Pet poop (all types combined – cat litter, unbagged, bagged)

Top items that could be composted but were placed in garbage:

- Chicken bones
- Paper towels
- Bio Bags
- Green cups

Top items that were contaminating recycling include:

- Green cups
- Coffee pods
- Plant marker tabs
- Plastic shopping bags (should be recycled at the store)
- Produce bags

Top items that could be recycled but were placed in garbage:

- Coffee cups
- Plant pots
- Plastic shopping bags (recyclable at the store)

Top items that participants weren't sure which cart they went in:

- Coffee cups
- Plastic shopping bags
- Coffee filter grounds

Top items that participants tended not to be able to tell what the image was:

- Bagged pet waste\*
- Coffee pods\*
- Unbagged pet waste
- Produce bags\*
- Green cup
- Bio bag
- Grass clippings
- Cat litter
- Veggie Scraps

\*Participants felt the images of the starred items still needed improvement, even after they were identified.

It's interesting to note that 100% of participants correctly sorted glass into the recycling cart.

Suggestions for improving images included labeling bags with a stamp such as a paw print, a fruit, or wording, and to use a standard poop emoji instead of the unbagged waste. Adding descriptions was also suggested, particularly since items are not scaled relative to each other. (Some thought coffee pods were plant pots, others could not tell the difference in the various bags.) Also providing clearer images or better images would help.

Participants were most surprised by the actual guidelines for pet waste, paper products like cups and paper towels, plant tags and plastic bags. These tended to be more misunderstood.

The following table shows the approximate percentage of participants who placed items into the wrong cart. Note that in some cases more than half of the participants are correctly disposing of various items.

	1-25% Of Participants	26-50% Of Participants	51-75% Of Participants	76-99% Of Participants	100% Of Participants
<b>Incorrectly in Yard Waste</b>	Pet Waste Unbagged Pet Waste Produce Sticker Cat Litter Produce Bags	Coffee Cup	-	-	-
<b>Incorrectly in Recycling</b>	Produce Sticker Bio Bags Produce Bags	Coffee Pods Egg Cartons Shopping Bags	Green Cup Plant Tags	-	-
<b>Incorrectly in Garbage</b>	Coffee Cup Green Cup Bio Bags Egg Shells Coffee Filter Planter Pot	Paper Towels Chicken Bones	-	-	-

The following table outlines the items that were not sorted into a bin because, either the participant did not know where to place it, or could not tell what the image represented. These items were an issue for 25% or fewer of the participants.

Not sure which cart to sort it into	Couldn't tell what the image was
Coffee Cup Coffee Pods Green Cup Egg Cartons Diapers Shopping Bags Paper Towels Chicken Bones Coffee Filter Planter Pot Produce Bags	Coffee Cup Coffee Pods Sticks/Wood Plastic Garbage Bags Unbagged Pet Waste Produce Sticker Coffee Cup Coffee Pods Sticks/Wood Plastic Garbage

Images Used for Sorting Exercise



## **Day 2**

### **What About the Guide and Tag?**

*[Note that images of the guides and tag are below.]*

Generally, participants thought the guide was good and provided a good amount of information. Some liked the images, and some liked seeing guidelines for handling various types of items. However, some participants were confused about the information presented finding it vague or not detailed enough. It raised more questions for them. A few of the images on the garbage guide were problematic. Specifically, participants were not sure what the image of the bottle caps and the diaper were supposed to be.

Most participants felt that cart tags would be helpful and they would appreciate the reminder. However, some thought that having the tag outside was too late since items were sorted in the house. A few felt some of the images were unclear. Others would like to see more images, particularly for the more confusing non-food items. A few mentioned the tag would be helpful when guests were helping with clean up.

Participants had a wide range of suggestions for what they would like to see on the guide and tag. Most were for areas they would like more detail on: cooked v. uncooked food, empty bottles from bleach or other cleaners, the less-regular “cleaned out the garage items” like paint and construction waste. One suggested a QR code to easily scan for more information.

Participants overall felt that the level of information provided in the guide and tag as shown was good. However, they would rather err on the side of having more information provided rather than less, but wanted it simple and clear. That said, there were some participants who felt that less information was better to ensure that people would read it and not feel overwhelmed. Several mentioned that they still wanted to have information available on the website, and others suggested focusing the guide on frequently mis-sorted items.

### **What Compostable Means**

Overall, residents understood the meaning of “compostable.” Some were quite technical about it, while others understood the basic concept. Responses ranged from: *“Items that can be combined and made to produce compost”* to *“Items that are readily broken down with oxygen and bacteria to create a rich and fertilizing material for gardens.”*

### **Primary Contaminant**

While plastics are felt by Waste Management to be the primary contaminant, this study suggests that it is actually pet waste. When participants were asked what they thought the most mis-sorted items were, less than a third thought it was plastic, while about two thirds thought it was pet waste. Several of the participants admitted to putting pet waste into the yard waste, and those who were putting plastic in thought it was the compostable type.

## Real Life Confusing Items

In real life, residents found several items confusing when deciding what to place in the yard waste bin. Top concerns were paper types (pizza boxes, food/milk cartons, coffee cups, cardboard, paper towels), pet waste (dog, cat litter, chicken coop bedding), soil/dirt, branches vs. 2x4s. A few were confused by food items and meat/bones. Some mentioned concerns with animals such as their dog getting into the kitchen bin or bears and rodents being attracted to the outdoor cart.

A few shared details on recycling items they found confusing to sort, including plastics (milk jugs, bags, hard containers, disposable cups), lids and the plastic numbered items (numbers in triangles on the bottom of plastics). Some plastics might be thought to be compostable, and were mis-sorted into the yard waste cart.

Below is the compost guide, garbage guide and cart tag images viewed by participants.

### Compost Guide

**COMPOST | FOOD SCRAPS AND YARD DEBRIS**

**These items go in your compost cart**

Sign up for compost service by phone or online at [wmnorthwest.com/kingcounty](http://wmnorthwest.com/kingcounty) • 1-800-592-9995

NO  
PLASTIC

**Food scraps and leftovers**  
All food including meat, cheese and bones.



**Plants, flowers and yard debris**



tree branches under 4" long, 4" diameter

TIP: Remember to trim down branches to 4" x 4" and make sure your trees are uncoated.

**Uncoated paper**  
Greasy paper or pizza boxes, shredded paper (layer in cart, or place in paper bags; no plastic), uncoated non-shiny paper plates, waxed paper, waxed cardboard, approved compostable packaging (see [cedar-grove.com](http://cedar-grove.com))



**When you've used what you have and still have some left? Compost!**

- 1) Collect food scraps in a kitchen container, paper bag or approved compostable bag.
- 2) Empty into your outdoor food and yard waste cart.
- 3) Rinse kitchen container and repeat!

TIP: Empty your kitchen container into your cart regularly.

**Did you know?**  
Almost 35% of what ends up in the landfill is food scraps and food-soiled paper? Do your part to reduce food waste by pledging at [www.foodwasteyrlding.com](http://www.foodwasteyrlding.com).

**Extra Yard Waste**  
There is a charge for extrayardwaste. Put extra yard waste in Kraft paper bags or 32-gallon containers with lids – label "Yard". Only extra yard debris may be placed in Kraft bags. Food scraps and uncoated paper must be placed in the compost cart. Call 1-800-592-9995 for more information.

www.wmnorthwest.com/kingcounty 1-800-592-9995

### Garbage Guide

**GARBAGE**

Bag all garbage and put in your garbage cart.

What do I do with?

**Non-recyclable plastic**



**Non-recyclable glass**



Not Garbage!  
Requires proper disposal. Visit [lightrecycle.org](http://lightrecycle.org) to find a drop-off site.

**Non-recyclable paper**



**Non-recyclable metal**



Lidless than 3" diameter

**Other garbage**



**Garbage Guidelines**

Please:

- Bag all garbage.
- Double bag pet waste, pet litter, packing peanuts, vacuum dust, sawdust and cold ashes.

**Extra Garbage**

Garbage charges are based on cart size. There is a charge for extra garbage that doesn't fit in your cart with the lid closed. If your garbage cart lid is open more than 6 inches, there will be a charge for extra garbage.

Bulky items such as mattresses, large appliances and building materials can be picked up by special arrangement for a fee. Contact us for fee information.



**1-800-592-9995**

www.wmnorthwest.com/kingcounty

**Cart Tag**

**COMPOST MORE  
WASTE LESS**

**ACCEPTED IN  
FOOD AND YARD WASTE BIN**

**NOT ACCEPTED IN  
FOOD AND YARD WASTE BIN**

			
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### Day 3

Participants were shown four potential educational pieces and asked to provide feedback.

#### Execution T “Curbside Compost”



While about half of participants thought that this ad was about making sure not to place the wrong things in the bin, about a quarter specifically mentioned keeping plastic and glass out of the bin. They also took away that placing the wrong things in the bin could affect the food you eat. *“Non-compostable items in the compost bins will end up back in my yard or table.” “The items at the top of the circle turn into dirt. Things like glass and plastic don’t.”*

Many of the participants said that this execution did not confuse them and they would not change it. Other individuals shared concerns:

- It does not indicate which cart it’s talking about
- It needs to have larger font in the bottom paragraph
- The image is confusing because you have to look closely to figure out what it is about

- Some items in the image are unclear
- The details of the consequences of plastic and glass in compost are not spelled out

The general consensus on this execution seems to be that they had to really study it to understand that its message is to leave plastic and glass out of compost and therefore would like it to be more straightforward. The wreath image used in this rendering was well received. Many participants, both women and men, found it very appealing.

### Execution N “Foodcycling”

YOUR FOOD SCRAPS ARE USED TO MAKE COMPOST. COMPOST IS USED TO GROW FOOD. IT'S A FULL FOOD CYCLE.

**Foodcycling**

Food waste goes in your yard waste bin, which goes in the yard waste truck, which becomes compost, which is used to grow new food. And by keeping plastic and glass out of your yard waste bin, you contribute to a natural food lifecycle.

So compost your food scraps, and keep the cycle going.

**WM**  
WASTE MANAGEMENT

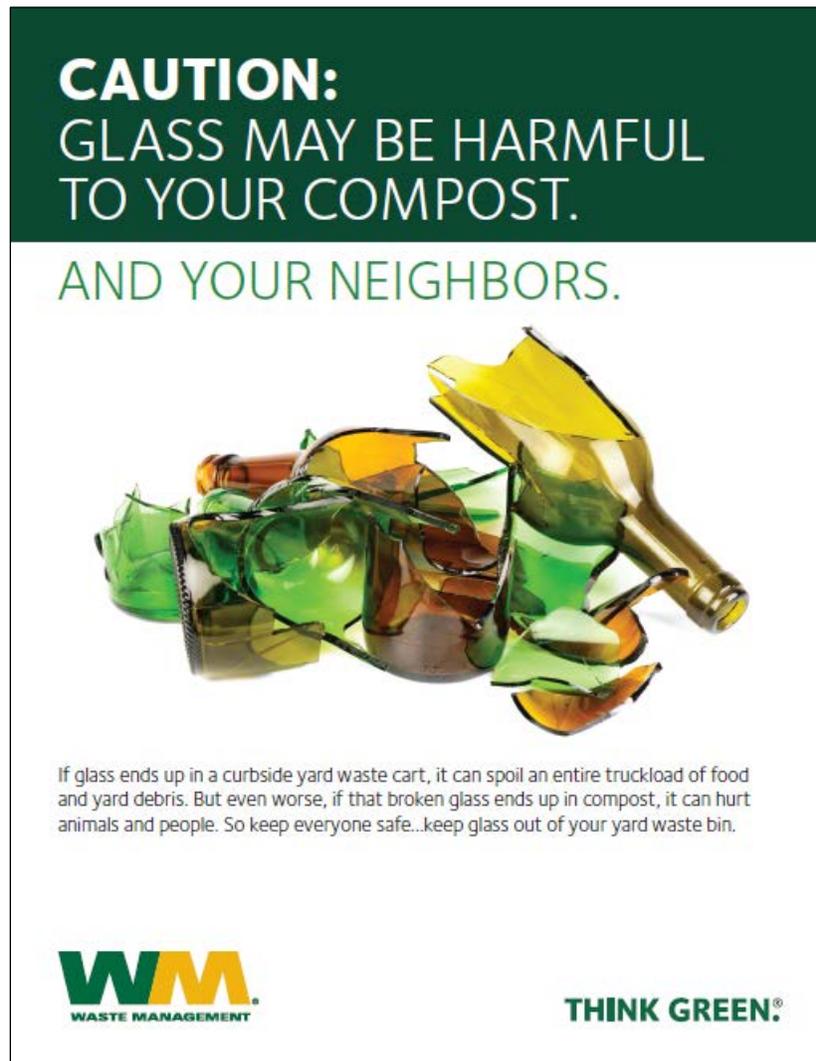
**THINK GREEN®**

About a quarter of participants took away that glass and plastic should not go in yard waste. The rest viewed the ad as conveying information about the food cycle, and how compost becomes food. *“It shows a simple depiction of the yard waste/food waste composting process.”*

Several participants commented that the emphasis on food composting in the image might lead some to think they could only compost food items. A couple mentioned that they didn't understand what the tractor was doing.

Almost all participants found the ad believable, but it's important to remember that they were not getting the intended message. Those who understood the ad was about contaminants in the yard waste felt that that detail needed to be better represented visually in the ad. *"There is a beautiful graphic to demonstrate foodcycling and the message about not putting glass and plastic gets lost."*

### Execution H "Safety"



Nearly all participants understood that this ad was about keeping glass out of the compost. Many elaborated that it is bad for the compost and unsafe for people and animals.

Most did not feel the ad was confusing, though several mentioned that they would like to understand exactly how the glass is dangerous. For a few others, the ad raised questions about which bin it was about (defaulting to recycling). Some wanted to see a cut finger to better illustrate the danger. Some suggested that a red X be placed over the glass to convey immediately that it does not belong in the bin. One person wanted to know why it ruins a whole load of compost and can't be removed at the facility.

More than half felt that the ad would prevent people from placing glass in their yard waste. Those that didn't felt the paragraph text was too small and would be skipped over. Interestingly, the message was not considered compelling enough because people don't know their neighbors and may not care what ends up in their neighbor's yard or the connection between the neighbor's and one's own compost is not clear.

### Execution L "What Goes In"

**KEEPING PLASTIC OUT  
OF THE YARD WASTE CART**

KEEPS PLASTIC OUT  
OF THE COMPOST.

Just one plastic bag in your yard waste bin can translate into thousands of tiny bits of plastic in the compost that goes in your neighbor's yard. Or garden. Or farm.

So help keep our compost clean, prevent plastic bags and other plastic items from getting into the yard waste.

**WM**  
WASTE MANAGEMENT

**THINK GREEN.**

All participants understood that this ad was about keeping plastic out of the yard waste bin/compost.

A few found the image of the fruit in the “correct” image confusing and would like to see something other than a bunch of bananas so that it looked more like fruit. Others couldn’t tell that the other image is a plastic bag.

Overall the ad was seen as believable and provided enough information. A few wanted more information about why to keep plastic out, and some wondered why their neighbors were the concern. One mentioned already having experienced glass and plastic bits in the compost they had purchased. *“It’s somewhat motivating. I thought the plastic was picked out and thrown away. Didn’t know it was in the compost. Yuck. The ocean and now our yards.”*

### **General comments across all executions:**

Participants shared general observations and comments that were common across all four ad executions. These are as follows:

- Bin colors differ between service areas. Not all yard waste carts are green.
- A few participants mentioned that the ads did not talk about pet waste as a contaminant.
- Participants tended to prefer images that conveyed a message clearly without having to read the text. Text for details should someone want them.
- Some ads seemed crowded with text above the image.
- A few people had trouble with the word “neighbor.” Examples of comments included:
  - *“Why does the bad stuff only go into something my neighbor owns?”*
  - *“I’m sensing a trend in the messages as to how ‘glass’ or ‘plastic’ in the compost bin affects our neighbors. I tend to believe people are more self-centered and will only truly care if something also affects them. Maybe change up the wording so that these messages say that the contaminated compost might end up in their yard, the park they take their kids to, the dog park they use, etc...”*
  - *“If I didn’t like my neighbor, it would encourage me to put the wrong things in.”*
- People wanted to know more about the reasons why they need to comply.
- Ads need to be clear about the message and which waste container is being affected. Many ads were not immediately clear that they were about the yard waste bin.
- Participants did not want any ambiguity about which container glass should go in. They felt it was ambiguous because it was not crossed out or because the text or image of some ads were not clearly specific to the yard waste bin.

### **Most Effective Ad?**

Participants viewed three of the ads similarly in terms of which would be most effective in encouraging customers to be careful about what they place in their yard waste cart. These were Cart to Garden, Foodcycling and What Goes In. The Safety ad was seen to be less effective than the others overall.

### **Do We Really Need This?**

Participants in general agreed that there was a place for messages like those provided by these ads. They wanted the ads to be more clear in what they were addressing (glass and plastic) but they also felt it was important to continue to provide more detailed lists of what is accepted in yard waste for those who were interested.

In addition, many felt the message of what is actually done with the compost and where it ends up needs to be highlighted in some way. This message was motivating and provided a clear reason why compliance was important. *“I think you could combine all four into one message - but explain why. They do not go into detail on why the plastic and glass are harmful.” “I think providing a message like this will be beneficial because first, I myself did not know that WM does this with compost so now I am more intentional and will pay more attention to what I put in the waste bin. Providing a list is something people just skim through and not really pay attention.”*

### **What We Need to Do It Right**

Participants want to see the information in different forms, meant to convey different levels of information. Suggestions included:

- Show pictures of what is accepted and not accepted, in part because images are faster to comprehend versus text.
- Show a quick list of what can't go in the yard waste focusing on the most serious items
- Tell people what the negative effect is from the incorrect items and what happens to the contaminated compost
- Convey the entire cycle of compost production, similar to the Foodcycle ad but in a video format as well for those who are interested
- Educate people where the compost goes – farms, food, your garden etc.

Nearly all participants would like to receive information on proper sorting of waste on their carts via a tag, label or sticker. About two thirds would also like to get information in the mail. Less than a third preferred to receive information via traditional media, compost stores, email, online advertising or social media.

The preferred information sources on sorting of waste were from the waste collection company, or from the waste processor who produces the compost. Next preferred were farmers, gardeners and landscapers, workers at a compost facility, and King County.

## Appendix – Participant Demographics

Name	Area	Pick Up	Responsible	Household	Age	Income	Educ.	Ethnicity	M/F
Alicia	Suburb	Daily	Me only	Adults, kids 5-18	45	\$150K	CG	Caucasian	F
Amy	Rural	EOW	Share	Adults, kids >18	52	\$100-149K	CG	Caucasian	F
Carrie	Urban	Weekly	Share	Adults only	40	\$75-99K	CG	Caucasian	F
Carol	Rural	Weekly	Share	Adults, kids 5-18	52	\$150K	Assoc	Caucasian	F
Cate	Suburb	Daily	Share	Adults, kids <5	56	\$50-74K	CG	Caucasian	F
Chong	Suburb	Weekly	Me only	Adults, kids <5, 5-18	35-40	\$150K+	CG	Asian	M
Christie	Urban	Weekly	Share	Adults only	32	\$50-74K	PG	Asian	F
Cora	Urban	EOW	Me only	Adults only	32	\$100-149K	PG	Caucasian	F
Daniel	Rural	EOW	Me only	Adults, kids 5-18	37	\$75-99K	CG	Caucasian	M
Dmitry	Suburb	EOW	Share	Adults, kids 5-18	40	\$150K	CG	Caucasian	M
Gustav	Suburb	Daily	Me only	Adults only	31	\$150K+	PG	Caucasian	M
Ian	Urban	Weekly	Me only	Adults, kids <5	40	\$100-149K	HSG	Caucasian	M
Jan	Suburb	Weekly	Me only	Adults only	67	\$150K+	PG	Caucasian	F
John	Rural	Weekly	Me only	Adults, kids 5-18	54	\$75-99K	CG	Caucasian	M
Josephine	Urban	EOW	Share	Adults only	55	\$75-99	Assoc	Nat Haw/Pac Island	F
Kent	Rural	EOW	Me only	Adults only	39	\$75-99K	CG	Cauc	M
Laura	Suburb	Weekly	Share	Adults, kids <5, kids 5-18	34	\$150K+	CG	Caucasian	F
Mary	Suburb	EOW	Share	Adults only	61	\$75-99K	Assoc	Afr Am	F
Megan	Urban	Weekly	Share	Adults only	32	\$75-99K	Assoc	Caucasian	F
Nadine	Suburb	Weekly	Me only	Adults only	51	\$50-74K	CG	Native Am/Alaskan	F
Robert	Suburb	Weekly	Me only	Retireds	71	\$50-74K	PG	AA	M
Sara	Suburb	Weekly	Share	Adults, kids <5	35	\$150K+	CG	Caucasian	F
Scott	Urban	Daily	Me only	Adults only	39	\$150K+	CG	Asian	M
Sharon	Rural	Daily	Me only	Adults only	48	\$100-149K	CG	Caucasian	F
Susan	Rural	EOW	Share	Adults, kids >18	57	\$30-49K	SC	Caucasian	F
Terry	Suburb	Weekly	Me only	Adults only	72	\$50-74K	HSG	Caucasian	M
Thor	Suburb	Daily	Me only	Adults, kids <5	41	\$150K	PG	Caucasian	M
Tricia	Suburb	Weekly	Share	Adults, kids 5-18	41	\$100-149K	HSG	Asian	F