





Organics Contamination Qualitative Study

KING COUNTY SOLID WASTE DIVISION October 23, 2019

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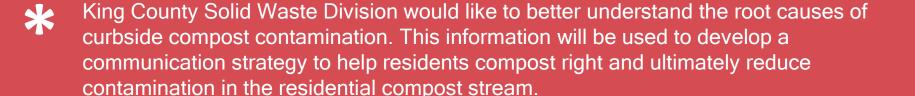
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Background

- On average, 4% of the contents of King County yard waste carts are contaminated.
- Compost facilities report that plastic bags/film and glass are the most problematic contamination from the processing perspective. However, the major sources of contamination are not clear.
- There isn't currently a clear understanding of what beliefs, attitudes and behaviors are driving this contamination.



Research Objectives

Gain in-depth understanding of the beliefs, attitudes & behaviors that lead to contamination in the curbside compost cart

In addition, key areas of exploration included:

- Root causes of curbside compost contamination
- Motivations and barriers associated with behavior change around decreasing curbside compost contamination
- Interest and willingness to modify curbside contamination behaviors

Methodology

C+C conducted 14 1-hour in-home interviews between Sunday, August 4th, 2019 and Tuesday, August 13th, 2019

- Each interview was scheduled to occur 1 -2 days prior to yard waste pick-up
- Respondents represented a mix of ethnicity, age, gender, income and family status
- Interviews were conducted in the following locations: Renton (3), Burien (2), Kent (2), Kirkland (2), Bothell (1), Kenmore (1), Shoreline (1), Newcastle (1), and White Center (1)

Respondents were required to complete a "pre-work" assignment prior to the scheduled interview

- Respondents collected items that would normally go into the compost cart for 5 days (these items were stored in plastic bags in the refrigerator or freezer)
- Each day, respondents were asked to capture when they placed items into the plastic bag or curbside bin, who placed the items in the bag or bin and how they reached the decision to place the items into the bag or bin

Participants

Goal: interview respondents that reflect mix of demography and location

GEOGRAPHIC LOCATION	
Burien	2
Renton	3
Kent	2
Kirkland	2
Bothell	1
Kenmore	1
Shoreline	1
Newcastle	1
White Center	1

GENDER	
Male	3
Female	11

AGE	
21-24	1
25-34	0
35-44	5
45-54	2
55+	6

EMPLOYMENT	
Full-time	7
Part-time	3
Work in	2
home	
Retired	1
Unemployed	0

# of people in household	
1	0
2-3	8
4-5	3
5+	3

HOUSEHOLD INCOME	
\$25K - \$34K	0
\$35K - \$44K	1
\$45K - \$54K	2
\$55K - \$64K	0
\$65K - \$74K	2
\$75K - \$89K	3
\$90K - \$124K	2

\$125K - \$150K

\$150K+

How many under age 18 in

home?

3

ETHNIC IDENTITY	
Black or African-	2
American	
Asian or Asian American	2
Hispanic or Latinx	2
White	5
Other	3

EDUCATION	
High school grad	1
Some college	1
2-yr college grad	9
4-yr college grad	3
Post-graduate	0





People view composting as part of the overall waste management system for their home. They decide: "Which bin should I put this in?" not, "Is this compostable?"

People decide if something should go into the compost bin by how it looks or feels (is it porous, waxy, thin, etc.).

People are extrapolating messages to assume that food-soiled recyclables should go into the compost bin. All respondents mentioned the need for recyclables to be "empty, clean and dry", but some are assuming if they are not, they should into the compost cart.

The variety of messages between business composting and home composting drives confusion (e.g. Taco Time - it can all go into the compost bin there, so I can also compost things that look like that at home).

People don't think small things like a produce sticker make a big impact.

People tend toward putting items they unsure about into compost cart (or recycling) because they feel good about putting them there rather than in the garbage.

People do not know what happens to the materials that go in their compost cart - but they feel that something good/beneficial does happen to them. They want to compost right.

People don't like the idea that they can buy back the items they put in their cart as compost - they associate that with the "ick" of the materials they put in the cart.

Top barriers to composting are perceived ick, hassle and time.

People know about the recycling/composting guide but don't necessarily use it or interpret it correctly. They tend to rely on assumptions, habit or an "expert friend" for information.

CAUSES OF CONTAMINATION



Summary of Contamination Causes

Flawed decision-making processes

5 Household dynamics

Coated vs. uncoated ambiguity

6

Belief that small mistakes don't have effect

Confusion over how to determine "compostability"

7

"Ick factor"

4 Confusion surrounding business composting vs. home composting

Flawed decision-making: a common source of contamination is the result of flaws in household decision-making processes related to sorting waste

One decision-making issue we saw regularly was how people extrapolate and interpret two specific messages that have been communicated to King County residents. For example, people combine the message that a food-soiled pizza delivery box belongs in the compost (not recycling) with the message that recycling needs to be empty, clean and dry.

Many people draw the conclusion *that all soiled recyclables should go in the curbside compost bin.*

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"Well we know about the pizza box, and how that goes in [the compost], so why wouldn't the donut box [store bought with plastic film]? it's paper and it's empty...and if I can throw a pizza box away why couldn't it [the milk container] go in?"

- Dinah (8/12)





"I feel like if it feels like paper, it should be compostable...and I feel like if food has touched it, then it's contaminated and it can't go in the recycling"

- Stephanie B. (8/5)



"Chinese takeout container goes in the compost "it's paper... soiled paper...and the food is ok"

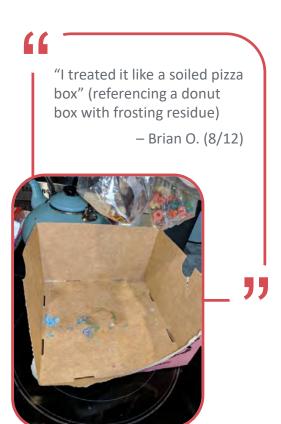
- Jackie (8/13)



"I think of pizza boxes, and that's what's informing me to put things like the half gallon milk containers in the compost because of that idea of it being 'foodtouched'"

- Stephanie B. (8/5)







"I use the pizza box method, if something has a more 'papery' feel, it goes into the compost. Because it feels like a pizza box"

– Marissa H. (8/7)



In referencing takeout wrappers: "I thought they were compostable because they had food in them"

– Cathy G. (8/6)



"If it touches food – it's compostable" (specifically referencing paper towel)

- Joann F. (8/6)

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Coated vs. uncoated conundrum: People are aware that "coated" items can't go into compost bin; however, "coated" is an ambiguous term.

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"If it's waxy, don't throw it in there [yard waste]"

- Brian O. (8/12)



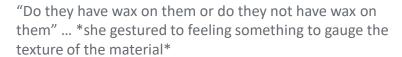
"That waxy paper on pears...it's not too waxy. I guess it can be composted"

- Lori W (8/4)









- Sabena D. (8/5)







Often this ambiguity, coupled with a desire to compost more, causes people to put food-soiled "coated" items into the compost. Examples include: ice cream containers, fast food wrappers or containers, and some types of takeout containers.





Confusion over how to determine "compostability": Many people rely on their senses to assess whether an item is compostable

Several people thought something is compostable if it breaks down over time. Therefore they rely on their senses to decide if it's compostable. Most common forms of these assessments included:

- ...it seems like it will degrade because it looks "natural" or seems permeable
- ...it has a matte finish (doesn't look like plastic)
- ...it's more malleable than plastic (less rigid than plastic)
- ...it came from the earth to begin with

"Information is evolving but I'm not catching up with it, so I just go with what I think is right"

- Stephanie B. (8/5)

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"If it looks papery, not plastic-y, I would put it in the compost"

- Lori W (8/4)

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"[This] has a more of a papery feel...those go into composting... because that feels like a pizza box to me"

Marissa M. (8/7)



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"[I can tell] by that gut feel. I guess I'm going off of the thought that if I were to leave it outside over time it would turn to dirt"

– Sabena D. (8/5)



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"I don't care if the guide says that it [greasy pizza box] needs to go into the compost, I put it in the recycling...because it's paper"

- Paulin T. (8/4)



"Butter is kind of a fatty thing, so that goes into the garbage. Fat, grease, oil...I don't picture that going into the compost"

- Dinah (8/12)

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"Because this looks fibrous, it'll break down" (referencing a corn husk)

– Dinah's husband (8/12)

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"That kind of cardboard that can go in the oven and doesn't catch on fire...that always goes in the yard waste"

– Cathy G. (8/6)

"

"Thick vs thin materials

— I kind of make my
assessment based on
that"

- Brian O. (8/12)





"The wrapper around the hamburger is kind of like the same thing as a paper towel, so why wouldn't it go in the compost"

– Paulin T. (8/4)

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"The stickers are kind of edible, I've read about that, so I imagine they can go in the compost"

– Wai (8/11)

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"Compost to me...according to what I've trained my brain to think...anything that's outside yard waste, anything I can eat, and those green baggies and products"

- Joann F. (8/6)



"It [dog poop bag] just feels like it's thinner...it feels like there's more space for oxygen to get through... And I get them from Amazon, so you would think because of all of the things that Amazon is doing, the bags they sell would be biodegradable"

- Cathy G. (8/6)





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"This [takeout container] was something based on feel. It's soft...something like if it got water on it would disintegrate"

– Sabena D. (8/5)



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Business composting vs. home composting: experiences with commercial compost programs and compostable packaging leads to confusion at home

People see that many food service businesses offer composting and use compostable packaging, and they extrapolate this in many ways:

- They use the look and feel of these types of containers as a benchmark
- They think that anything they have at home that looks like the compostable containers from a restaurant are likely to be compostable
- They put restaurant takeout containers into their curbside compost bins

Soup container from
Metropolitan Market –
"I had to stop to think
about if it's compostable
[how did you figure it
out?] It's paper and
soiled food, so it is"

– Jackie (8/13)

"Forks and spoons at Taco Time being compostable is new to me...some places have compostable silverware and that confuses me"

- Wai (8/11)

Other than educational programs, I learn the most about composting based off of businesses and their composting practices...like Taco

– Quinn M. (8/4)

[Referencing restaurant compostable utensils] - "You think it's something that could be composted, but it has that plasticky feel to it so I don't know what to do"

– Marissa M. (8/7)

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"It's [Chipotle take-out container] one of the things I question...I think it's compostable." [and how do you know?] — "it's a combination of what my guide says...what Taco Time does, because I trust them...and a gut feel"

- Sabina D. (8/5)



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"The Taco Time compostable packaging has sparked our interest in looking at other packaging"

- Stephanie B. (8/5)



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"But then there's a baggy that the [coffee] pods come in that says "industrially compostable" and "for industrial composting...I don't even know what that is" [she put it in the compost]

- Dinah (8/12)



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Household dynamics: Additional influences on compost contamination are often a result of the hustle and bustle of busy households

Typically, one person in the household is the "captain" of the household's waste management process. Often this person does not have the bandwidth to make sure everyone in the home is following the rules.



"It's really hard with the kids to make sure they're putting everything in the right place"

– Brian O. (8/12)

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"See? There you go...is that supposed to be there? Absolutely not...But one of my kids probably put it there."

Joann F. (8/6)



"...Sometimes he'll even go
through things before we put it out
and say 'you know that doesn't go
in there'"

- Cathy G. (8/6)

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"Two teenage boys and my mom and they still don't get it...and throw food scraps and things in the trash. When I'm here, I'm aware"

- Jackie (8/13)

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"I [husband] think about the staple [on the tea bag], she [Dinah] doesn't think about it"

– Dinah's Husband (8/12)

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When the person who owns the waste management process at home has a question, they turn to someone they view as an expert. However, that "expert friend" does not always have the right information.

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"I have one total hippie friend...and she is like a bloodhound when it comes to things like this and always knows the answer"

– Sabena D. (8/5)

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"And I have this one friend who knows a lot about this kind of stuff, so I ask her..."

- Joann F. (8/6)

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"There's one coworker in particular who is like a Martha Stewart, but a green Martha Stewart." [and what makes her credible?] "I think it's because she really walks the walk"

- Marissa M. (8/7)

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Small mistakes don't matter: some people think a small mistake (like a produce sticker) will not have a big effect

They rationalize that they are doing so much good with their composting practices that they don't need to be concerned if something small slips through.





"I don't have any sense...I know it's wrong but how wrong is it really? [Referring to compost contamination]. I feel like if a tin can slipped into my compost, that's easier to take care of in the back end"

- Paul B. (8/11)







"I don't think about the sticker being a huge impact"

- Marissa M. (8/7)

Produce sticker would have minimal impact – "when everything breaks down, it's just this little spec of something"

- Brian O. (8/12)





When produce has gone bad and it is in a plastic bag (the "produce ick factor"), some people say that at times they have put the whole thing in the compost.



"If they're that gross, I'd probably just leave them in the bag and drop them in the yard waste...sometimes I'm bad"

- Brian O. (8/12)





"I'll put the entire yogurt and its container into the compost because if it's expired it's gross to handle it"

- Paulin T. (8/4)

ATTITUDES & BELIEFS ABOUT COMPOSTING



People compost because they believe it's a good thing to do, but they aren't really sure why

Most people spoke in generalities about the benefits of composting -- the most frequently mentioned benefits of composting were:

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It keeps things from going in landfill

- · Cleaner and bigger habitat for wildlife
- Helps with the plastics in the ocean that are killing marine wildlife
- Provides more, healthier space for people to live

2

It's good for the earth

- Better for growing gardens with healthy, organic food
- Replenishes natural resources
- Reduces pollution and carbon footprint

Additionally, people who have seen landfills or toured recycling facilities seem to have a deeper sense of the issues with waste as a whole.

Some people also mentioned that composting helped to reduce the quantity of trash put in their garbage bin -- this resulted in one or both of the following benefits:

- If I have more garbage than my bin can fit before pick-up date, it is messy & smelly
- I don't have to pay extra for having too much garbage collection





Most people aren't sure about what happens to their compostable waste after it is picked up

- Very few linked it back to generating compost that people can purchase and those that did were kind of grossed out by the idea because they equate it to the "ick" that they have to deal with.
- A number of people thought it was "a big pile that becomes part of the earth"
- Some thought of it like recycling that it's made into something else
- Others thought it was used to grow food somewhere

"I still wonder where my yard waste goes...who is the big gardener in the sky ha-ha"

- Paul B. (8/11)

"

"I assume that the compost is going to be turned into something else, like fertilizer or something" —

- Paul L. (8/6)

"I guess I assume that the compost goes to a site, where they put it out commercially...maybe it gets shipped off to another country...maybe it goes to a farm...I would think it would stay local...wouldn't it go to a plant where it gets turned into liquid or something?"

- Dinah (8/12)

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"I have no clue...I guess I would imagine something would happen similar to the recycling process, where things go down a conveyor belt and someone picks it out...I would assume it eventually gets sold to farmers, landscapers, those kinds of things"

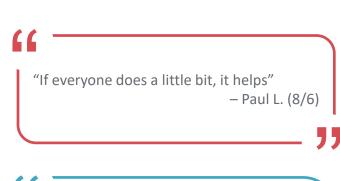
Sabina D.

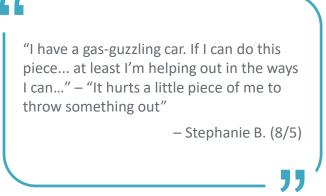
"

People feel really, really good about the efforts they are taking to compost (and recycle)

When asked why they make such an effort to compost, they almost always answer about how they feel vs. how it helps the environment.

- They feel proud that they are "at least doing something"
- They think their efforts have a big impact because they see their efforts as connected with other efforts
- They are truly mortified to find out they are making mistakes that do have a big impact
- They also want to make sure they are being a good role model to their children - who will be left dealing with the result of too much waste.





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"We're not going to have this world for future generations"

- Marissa (8/7)

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"What we do influences what bigger businesses and corporations do and the decisions they make"

– Quinn (8/4)

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"More than anything I'm trying to set an example for my son"

Stephanie B.

"

"It's more of a sense of not as much pride as ownership...we are all here together, we all have to do our part"

Joann F.

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"If you compost something, you're at least giving back to the earth. For all we take out of the earth, it's good to put something back in... We're such a pinch of nothing in the great big scheme of things. But it's a little something, and it's like charging a penny extra on something 10 million times, all of a sudden you have 10 million...I guess you'd say I'm one of the pennies"

- Sabina D. (8/5/)



"I'm absolutely mortified [in realizing the milk carton isn't supposed to go in the compost], and disappointed because I thought I was doing the right thing and it's not...because that means it's either contaminated it or someone else has to fish it out which is gross...and that makes me feel guilty because my little mistake has caused someone else to deal with it down the line"

Stephanie B.

CURBSIDE COMPOSTING BEHAVIORS



Getting Started

Most people got started in one of the following ways:

Through their children's education - field trips and/or their kids telling them about what they learned in school

"Kids were learning composting and recycling at school – that built accountability amongst the household"

- Lori W. (8/4)

They live in/moved to a city that requires composting

"The city of Renton made

us do it."

- Cathy G. (8/6)

There is also a sort of sense that they have graduated from recycling to composting.

"

"We feel good about how we recycle, and composting was like our next evolutionary step."

- Stephanie B. (8/5)

Composting is an integral part of a bigger system of managing waste in the home

People create complex systems and processes for managing waste as a whole that include:

- How waste get from all parts of the home to a central location
- How things get sorted recycle, compost, trash
- · Who makes the sorting decisions?
- When/how things go from the house to the bin

"

"We definitely have a cognition of what goes where, and we are always deciding between whether its recyclable, compostable or garbage"

- Dinah (8/12)

When faced with waste, the decision is not whether or not something is compostable - it's whether something is trash, recycling or compost.



"If I'm really not sure about something, it goes in the trash. But that's the last option."

- Joann F. (8/6)





Ultimately, there is a lot of effort and thought put into sorting the waste into one of three streams: garbage, recycle or compost. This overall approach to managing waste means that people are making multiple decisions about where items go every day.







Many people think they are recycling right. They clearly understand that metal, plastics, glass and some paper goods can be recycled. And, literally everyone we interviewed mentioned (unaided) that recyclable items have to be empty, clean and dry.



However, this study found that paper and cardboard are confusing to a lot of people because there is such a variety of finishes for these products.



We also found that a number of people still use the "chasing arrows" to determine whether or not a plastic container is recyclable.



Once people incorporate composting into their overall waste management process, it becomes habitual/routine

Before they develop their composting process and habits, many people think it will be a big hassle. But, once they find a way to assimilate it into the overall process of waste management, it becomes just another routine thing they do



No matter how integrated the process has become, or how committed the household members are, there are some common deterrents to composting that impact virtually everyone

- Ick factors: It smells, it's messy, it draws fruit flies and ants
- It's a hassle during some specific situations:
 - When it's raining or cold out
 - When it involves more than the usual number of trips to the yard waste bin
- Sometimes people just decide that the effort or inconvenience is not worth the benefits
 - One apple core might not be worth the trip
 - One produce sticker can't be that bad
 - The time it takes to do the right thing when that would interrupt/disrupt something they are currently doing

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"The biggest enemy to our composting is the garbage disposal"

- Paul B. (8/11)

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"I would never take just a little bit out to the bin [outside yard waste bin]; I would just never do it. It's gotta be worth the trip."

– Lori W.

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"It's just the ways that composting breaks my routine. Throwing tea bags into the trash, that's my routine"

Lori W.

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"If it's an apple core, put that down the garbage disposal because it's too small to make the whole trip outside to the yard waste bin"

– Paul B. (8/11)

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"Some tea bags have staples, some of them do not. Do I take the staple out? No I do not haha. That's too tedious. If Waste Management required us to do something like that then we would probably stop drinking tea haha"

- Cathy G. (8/6)

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"I'm not hardcore with my composting habits, I'm just too busy...If I'm in a rush, I'd just say screw it and it all goes in the trash. I know it's wrong but I'm being realistic"

Jackie (8/13)

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"For us, we compost the most after cooking full meals. It's easiest to remember to compost then because there's an accumulated pile of scraps. Snacks not as much, smaller items like leftovers just end up in the trash"

- Quinn M. (8/4)

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The curbside bin labels and recycling/composting guides may not be effective tools for day to day sorting

- When it's on the bin, it is too late for action by the time they see it, their waste has already been sorted:
 - Some people will not stop to check at that point.
 - Others say they won't correct a mistake at this point in the process because it's too messy.
- They start their search for answers with where they think the item goes.
 If it's not where they think it should be, they have to review the entire guide. This can be too time consuming & inconvenient.
- Some people told us that they do use their guide, so they "know they are right." But, when we checked guide, they saw that they were wrong.
- When they really need it, it's not convenient to look at it (i.e., they are not in proximity, they are dealing with kids, they are in the middle of cooking, etc.).
- When they get a new guide, they think there are no changes from previous version.



"When there are changes, do something to make them stand out on the guide, otherwise I don't know"

- Cathy G. (8/6)



Some people who had it posted on their fridge didn't realize it was there.



Sometimes looking to find answers on the guide gets confusing because what they are looking for isn't on there (the item doesn't easily match to images/words).



Information Needs for Residents on Curbside Composting

People are eager to compost right, but they want guidance that enables them to know exactly what to do with a particular item.

- A number of people told us that small tips and bits of information that they can easily implement or incorporate into their process would be useful and realistic to implement
- Some people really want well-defined rules for decisions
- There is a desire for consistency across cities
- Some spoke to needing clarity regarding residential composting vs. commercial composting
- Many want a clear indicator on the package of what to do with that particular item





Messaging and Outreach Recommendations

- Leverage the positive halo around composting and the strong desire people have to do it right
- Focus on helping people make *decisions* about where something goes which bin rather than whether something is recyclable or compostable
 - Develop campaigns that address specific materials and address all carts at one time. For example, a paper campaign that addresses which paper can go in recycle vs. compost vs. garbage bins
- Refine messaging that helps residents define which types of food-soiled paper and cardboard can go into the yard waste cart
- Give people permission to throw it in the trash if they don't know what to do
- Help people better understand why contamination is an issue (could combine this message for recycling and compost)

Messaging and Outreach Recommendations (cont'd)

- Don't link compost behaviors in the home with buying back that same material as compost, instead focus on more general messaging about reducing waste, protecting the environment and building healthy soil
- Focus on communicating about specific contamination behaviors one at a time
- When sending out guides, be sure to highlight what's new prominently
- Educate residents on differences between what you do with restaurant containers in a restaurant vs. at home; partner with prominent local businesses (like Taco Time) to get message out





Research Documents

Document	Click Icon to Review
Screener	Screener
Participant Details	Participant Details
Homework Assignment	Homework Assignment
Participant Homework	Participant Homework
Discussion Guide	Discussion Guide

