

Compostable Products Advisory Committee Meeting Summary

Meeting #7: Tuesday April 2, 2024 | 10:00 AM – 12:00 PM

Location: Zoom

Attendance

Members of the Advisory Council, Washington Department of Ecology (Ecology), Cascadia Consulting Group (Cascadia), and the public attended the meeting.

20 out of 27 Advisory Committee members attended (those who attended are marked with *):

Name	Affiliation
Alex Truelove*	BPI
Amy Clow	WSDA
Patti Stacey	Kittitas County
Jill Reeves*	City of Spokane
Gena Jain*	City of Kirkland
Heather Trim*	Zero Waste Washington
Janet Thoman*	CMA
Jay Blazey	Cedar Grove
Jenny Slepian*	Eco Products
Kate Kurtz*	City of Seattle
Liv Johansson*	WORC
Lewis Griffith*	City of Tacoma
Ryan Dicks	Pierce County
Travis Dutton	WSAC

Name	Affiliation
Mark Chidester	City of Richland
Reingard Rieger*	Tilth Alliance
Ron Jones*	City of Olympia
Samantha Louderback	Washington Hospitality Association
Samantha Winkle*	Waste Connections
Scott Deatherage*	Barr-Tech
Shannon Pinc*	NatureWorks
Alli Kingfisher*	Ecology
Wendy Weiker*	Republic Services
Peter Godlewski*	Association of WA Businesses
Zonell Tateishi	Yakima County
Rod Whittaker*	WRRRA
Brandon Housekeeper*	MW Grocery Association

3 Washington Department of Ecology (Ecology) members attended, but did not participate as Advisory Committee members:

- Cullen Naumoff
- Chery Sullivan
- Patrick Merscher

3 staff from Cascadia Consulting Group (Cascadia) attended as meeting facilitators and support:

- Maddie Seibert
- Hannah Swee
- Taylor Magee

7 members of the public attended.

Meeting goals

- Review research about OMM facilities in WA and the Composting Consortium
- Continue challenge identification
- Generate recommendations to the legislature

Agenda

Duration	Agenda Item
10 min	Welcome, agenda, & objectives
25 min	Where we've been and where we're headed
30 min	Research presentation
45 min	Review and discuss challenges identified
5 min	Public Comment
5 min	Closing remarks and preview next steps

Where We've Been & Where We're Headed

- Maddie oriented the group to where we are in the AC process, noting that we are slowly transitioning to solutions development.
- **New and updated research takeaways:** Hannah presented on new and updated research takeaways:
 - **Updated:** ~~While data is unavailable to answer whether compostable products increase food waste diversion~~ **Several studies completed at sports and food service venues (examples of closed-loop systems) in the U.S. show that compostable service ware increases food waste diversion.** We have not found any municipal studies of curbside organics collection and the correlation between compostable products and food waste diversion.
 - **New: There is potential to increase the capture of food waste into the organics stream.** Data from the WA Department of Ecology 2020-2021 statewide waste characterization study showed that nearly 20% of residential garbage consisted of food waste. **Additionally, food waste capture rates in King County (16%) and Seattle (36%) are relatively low.**
 - **New: There is significant opportunity to increase the capture rate of compostable products.** Data for King County and the City of Seattle shows that the capture rate of compostable products (except for compostable plastic bag liners) is below 65% and as low as 2% for single-use food service compostable paper in Seattle.
- **Questions/Comments:**
 - What is the capture rate for compostable bag liners?
 - Hannah replied that rates for bag liners were above 80%, and further data is available in the March research memo. As a next step, Cascadia will compile all research takeaways into one reference guide.
 - What style of restaurants were included in the studies?
 - Hannah replied that the studies looked at a variety of food service venue styles.
 - Is the goal of the study was to capture more food waste or compostable products?

- Hannah replied that the goal with the research takeaways is to capture what the research shows which is that one of the main drivers of taking compostable products is to increase food waste diversion.
- Heather commented that ZWW has a study that they will be releasing soon that looks at fast casual restaurants and there could be a distinction between beverage compostable products and other compostable food service ware such as a clamshell. Compostable beverage containers had limited food diversion effects, and could be potentially swapped for a recyclable alternative instead.
- The whole purpose of capture rates is to increase food diversion, but in working with a composter in OR, the facility used PLA compostables as a bulking agent to dry out the loads.

Research Presentation: OMM Facility Information

- OMM facility interviews: Hannah presented research from the OMM facility interviews:
 - Methodology:
 - Collaborated with Ecology to identify 27 organic materials management facilities to interview.
 - Represent all four regions across the state, accept a range of materials as feedstock, and use different composting methods. AD and biosolids-only excluded.
 - Interviewed 14 facilities for a 52% response rate.
 - Total of 26 questions spanning operations, feedstock, contamination, incentives and end markets.
 - Not all facilities responded to all questions and responses varied in specificity and consistency. Where possible, the Cascadia research team aggregated quantitative responses to protect confidentiality.
 - Findings:
 - Most of the available existing processing capacity is in western Washington.
 - Composting methods and processing times vary, with ASP being the most common technology used. Processing times reported were as little as 35 days to as long as six months.
 - 5 of the 14 facilities accept compostable products and are located near larger population centers. Only certified products by either BPI or CMA are accepted, and no issues reported with the disintegration of compostable products. Facilities did not report screening out or removing compostable products before processing.
 - Facilities that do not accept compostable products cited increased contamination and Washington State Department of Agriculture (WSDA) or Organic Materials Review Institute (OMRI) certification
 - Common challenges and barriers associated with accepting compostable products:
 - Facilities did not indicate any clear incentives, financial or otherwise, for accepting compostable products
 - Increased levels and variety of contamination

- Contamination caused by lookalike products and misunderstanding what material is accepted
- Contamination disproportionately increases the cost of processing material
- Most facilities reported processing fewer tons of feedstock than their permitted production capacity annually, however, some noted that production fluctuates significantly and during peak seasons they reach or exceed full capacity
- Several facilities that currently do not accept food waste and/or compostable products expressed concerns about being required to accept this material and potential changes it would necessitate in their operations and business model
- **Questions/Comments:**
 - Were biosolid facilities included in the study?
 - Hannah replied that biosolid only facilities were excluded, however, facilities that take biosolids in addition to other feedstocks were included. She noted that we asked facilities about the specific products they include but we didn't get that information.
 - Do findings refer to the number of facilities that reported these types of contaminants, not the total amount of contaminants found at facilities? Similar to market, is this the number of facilities that say they sell to these market sectors irrespective of the relative amount of material sold to these sectors?
 - Hannah replied that, yes, this is the number of facilities that have reported he contamination, and the number of facilities selling to specific end markets.
- **Composting Consortium Contamination Report:** Hannah presented main findings from the most recent Composting Consortium Report:
 - Results mirror findings from Washington OMM facility interviews.
 - Managing contamination increases costs.
 - Contamination is a challenge for all facilities, whether they accept compostable products or not.
 - Compostable packaging largely performed as advertised.
- **Disintegration Rates SME Interviews:** Key findings from the SME interviews:
 - Disintegration rates vary by type of product and composting conditions.
 - Elevated temperatures optimize disintegration. High moisture and oxygen are also impactful conditions.
 - Microplastics found in finished compost typically caused by conventional plastics and not PLA. Issue is pre-processing and lookalikes rather than disintegration rates.
 - Currently no U.S. standards or research publicly available on home composting disintegration rates.
 - Recommendations for future research includes compost facility conditions (could be used to develop standards for facilities), continuous and consistent field testing, and more data.
- **Questions/ Comments:**
 - Is this information included in the April Research memo?
 - Hannah replied that it was not included in the April memo, but will be included in the research summary memo.
 - What is the citation for products breaking down?

- Hannah replied that CMA found that roughly half of compostable products are breaking down in field tests.
- Are microplastics an issue?
 - Hannah replied that we can reach out to CMA and learn what the issues are.
- Can you provide clarification on the 50% product breakdown rate?
 - Janet Thoman shared that the 50% is an overall rate across all products tested, however there are different rates across product types that show different disintegration rates. Biopolymers tend to perform better than paper and molded paper, particularly in short systems.
- Have there studies about paper or molded fiber that hasn't fully disintegrated and if it continues to break down in the end product?
- Samantha Winkle noted that as a compost manufacturer, she is unable to sell any compost with visible contamination.
- Shannon Pinc noted an earlier question about the research on the findings in finished compost and that it is a disintegration issue not a pre-processing issue.
- Jenny Slepian shared that, yes, in speaking with composters they have mostly agreed that they will not be able to sell compost with visual residuals for ag use, but in CA this compost does have a market for DOT or road landscaping use.
- A member of the public shared in the chat: Wanted to jump back to the statistic shared on 50% disintegration of compostable packaging, and how this number conflicts with the real-world rate of successful composting of certified compostable packaging by Washington composters outlined in the presentation. This therefore calls into question the standard methodologies used to currently determine compostables' disintegration rates more broadly, and that these methodologies may not represent the real-world composting environments (mesh bags possibly altering moisture and temp, not moved or shredded like other items in the pile, etc.). It's my understanding there is further research debuting this month by Closed Loop Partners analyzing how compostables break down in various composting technologies, further analysis into how standard testing methodologies impact breakdown, and suggested best management practices. I think this research would be important to consider in future conversations, as these disintegration rates inform policy.

[MURAL discussion: research review](#)

The full Committee answered the following questions on MURAL. Their responses are listed below each question.

- What does this research tell us about what is working to achieve “the state’s goal of managing organic materials, including food waste, in an environmentally sustainable way that increases food waste diversion and ensure that finished compost is clean and marketable?”
 - Without explicit support or incentives for composters, it will be hard to increase acceptance of compostable products and the food waste they bring
 - This research tells us that some facilities are successfully processing compostables, and that, theoretically, this success is replicable
 - Public Education is needed

- A main issue with accepting compostables are look-alikes, not the compostables themselves.
- Use of bags is understood and used appropriately.
- That we still need more tools to capture food waste and keep a marketable product
- Find funding mechanisms & end markets to help composters is necessary for success
- What does it tell us about what is not working to achieve the state's goal?
 - Need increased enforcement to handle look alike products
 - Labeling laws are important; they should disallow look alikes
 - Proper inclusion of compostables in EPR can provide funding for municipalities and composters
 - Concerns over organic or WSDA certification of compost
 - Compostable products are associated with contamination due to look alikes and confusion
 - Upstream sorting is problematic and should be addressed aggressively
 - Customer confusion is an underlying issue
- Where do we see opportunities and barriers to improve compostable products management in Washington state?
 - Financial incentives/support is needed for sites that will have to increase equipment and staffing levels to accommodate these new products
 - Inclusion of compostables in EPR
 - Future funding for composters through EPR
 - What design components are best for consumers to easily distinguish compostables against look alikes?
 - Barrier: What is the value to the National Organics Program to allow compostable products to be included in compost
 - Which look alikes are the most problematic?

Solutions Discussion

- Maddie reminds the group of the scope of recommendation for HB 1033. She then presented the updated list of challenges and their initial solutions.
- The AC focused on **challenge #6: Acceptance of compostable products and food waste negatively impacts compost marketability. Compostable products impact organics certification and can introduce more contamination.**
- To turn the challenge theme on its head into a category of solutions, Cascadia proposed: **Support marketability of compost that has food waste and compostable products as feedstocks.**
- **Questions/Comments:**
 - Does the AC need to adjust their working definition for compostable products to reflect recent legislation changes?
 - Maddie replied that we can update the definition if we see fit.
 - We could also make a recommendation to change the definition.
 - Recommendation to work off the most recent legislation's definition.
 - BPI is currently petitioning the USDA to update organics certification to include compostable products.

- A member of the public shared in the chat: See <https://www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-112#112.54> for treatment options that will impact compost use on produce farms.

MURAL discussion: Solutions Discussion

The Committee considered solutions to **support marketability of compost that has food waste and compostable products as feedstocks**, beginning with ideas that had been raised in previous meetings.

The ideas raised in previous meetings were:

- More assurance of end markets for compost
- Details/data on compost end markets
- Data for how much of compost produced is clean and marketable

The Committee considered these ideas and generated others by answering the following questions. Responses are listed below each question and sorted by topic.

- Does the list of initial solutions generated by this committee resonate? Why or why not?
 - Assurance of end markets:
 - How would we assure end markets? No one wants to buy contaminated product- would we set thresholds?
 - Need assurance of organics certification with compostable products
 - Details/data on end markets:
 - Market details are always helpful to better understand product marketability
 - Lacking insight into price/ton per market and total tonnage moving into specific market channels
 - Data about how much compost is clean and marketable:
 - Clean according to which standards?
 - Need to understand what markets there are and how “clean” product needs to be
 - Need to include cost to reach “clean” and “marketable”
- How would you build these initial solutions out and further define them?
 - Assurance of end markets:
 - Update finished compost standards
 - State/local budget for compost procurement
 - Clarification is needed about how much anticipated supply in excess of demand there will be.
 - Encouraging use in appropriate applications
 - Ensure compliance of CPOs, grow those overtime
 - Details/data on end markets:
 - What is the demand for compost? Supply/demand data
 - What are the barriers to expanding compost markets?
 - Clarification/assurance about farmer incentives for compost use
 - Access to affordable compost spreading/transportation equipment
 - Data about how much compost is clean and marketable:
 - Clearer insight into consumer/end user standards for “clean” compost- may be different for different applications.

- Provide funding for contamination reduction equipment
- What is missing from the list of solutions?
 - Pass polices to reduce contamination:
 - Stronger labeling laws; confusion over compostable vs. Recyclable products
 - Fund composters procurement of screening equipment
 - Upstream solutions
 - Create policies that allow haulers to reject loads
 - Ensure definition of compostable products reflects products that work in Washington's system
 - Increased education to reduce contamination from compostable plastics and materials that come along with them
 - Strong enforcement of non-compliant products being sold in WA state
 - Are compostable products as great as we think?
 - Are certain compostable products better at collecting food waste?

Public Comment

- No public comments

Next Steps

The May AC meeting will take place on May 7th from 10:00am-12:00pm.

- Closing comments:
 - Can the Committee get a definition of residential vs. commercial?
 - Maddie replied that that is referencing waste characterization results and we can provide a definition for that.
 - There are larger issues than compostable products in organics collection.

Appendices

MURAL Discussion: Research discussion (Full Group)

1. What does this research tell us about what is working to achieve “the state’s goal of managing organic materials, including food waste, in an environmentally sustainable way that increases food waste diversion and ensure that finished compost is clean and marketable?”

The Mural board contains the following sticky notes:

- It does help with food waste capture in closed system venues like restaurants and stadiums
- Washington facilities are moving to accept compostable products and food waste without mandates or clear incentives along natural schedules/timelines for the facilities
- The compostable bag liners seems to be working
- This research tells us that some facilities are successfully processing compostables, and that, theoretically, this success is replicable
- That we still need more tools to capture food waste and keep a marketable product
- A main issue with accepting compostables are look-alikes, not the compostables themselves.
- Use of bags is understood and used appropriately.
- Without explicit support or incentives for composters, it will be hard to increase acceptance of compostable products and the food waste they bring
- Some of the assumptions that PLA doesn't compost as well is challenged by this data, but PLA is also the most confusing without proper labelling, so making it identifiable for composters remains important.
- Find funding mechanisms & end markets to help composters is necessary for success
- Seems like compostable products are neither a silver bullet nor a huge threat
- Public Education is needed

2. What does it tell us about what is not working to achieve the state’s goal?

The Mural board contains the following sticky notes:

- Labeling laws matter- need to disallow look a likes
- Upstream sorting is hugely problematic and needs to be addressed aggressively
- Proper inclusion of compostables in EPR can provide \$ for muni's & composters, etc
- Education - organics contamination is a challenge for all facilities, and those that accept compostable products get even higher contamination
- Customer confusion
- The presentation doesn't clearly say what the issue is, or what is not working in the market place
- compostable products are associated with contamination largely due to look-a-likes and confusion
- Offloading costs onto compost facilities is not sustainable. There needs to be \$ support.
- We don't understand facility processing conditions well enough
- Lookalikes and consumer confusion.
- concerns about organic or WSDA certification of product
- disparity in processing capacity between eastern and western WA
- currently no incentives for processors to accept compostables
- Needs to be enforcement to do away with look alikes.
- Contamination from actual garbage remains a problem. How can we work with people to address this? Bin pricing? Incentives?
- We need for clarity in the language we use. Food waste, compostable, single use, Commercial vs residential, etc. - There is to many broad statements and not enough specificity
- We need buy-in from the general public. Education is needed

3. Where do we see opportunities and barriers to improve compostable products management in Washington state?

Compostable Products Advisory Committee Meeting #7

Better data/clarity about consumer tolerance for residuals in compost	we need information about the relative amounts of contamination, not just the types of contamination	proper inclusion of compostables in EPR	we need research and education on how to best break down these products at facilities accepting them	Contamination and lack of end markets for material with contamination or other plastic. Continued market development needed.	What design/quality/labels does it take so end-users can easily distinguish compostables and look-alikes? It needs to be very easy.	Consumer education could include the entire solid waste system so more people get all of it right.	We need more detail on which products are the ones that disintegrate	We need information about produce stickers	How can facilities change their processes (increase temperature? increase time?) so compostables do break down fully before the product goes to market?
Financial incentives/support is needed for sites that will have to increase equipment and staffing levels to accommodate these new products		Future funding for composters through EPR	More data is needed from facilities about how long their processing times are	Seattle-esque rules to promote compostables in as single-use food ware alternatives to reusables, thereby avoiding non-compostable lookalikes	Need more granular detail on what is contamination so it can be addressed thru E&O.		Which lookalikes are the most problematic for composters?	If film is the top contaminant at facilities, is it also a lookalike?	
	Future prohibitions on misleading labeling by non-compostable products		Continue to allow municipalities to work with their local composter to roll out programs	there are ways to increase end markets for food waste compost - example - including in DOT, county/ city/ road projects	Barrier: What is the value to the National Organics Program to allow compostable products to be included in compost		if there is a state procurement contract process-ensure they are only allowing proper certified FSW products		

MURAL Discussion: Solutions Discussion

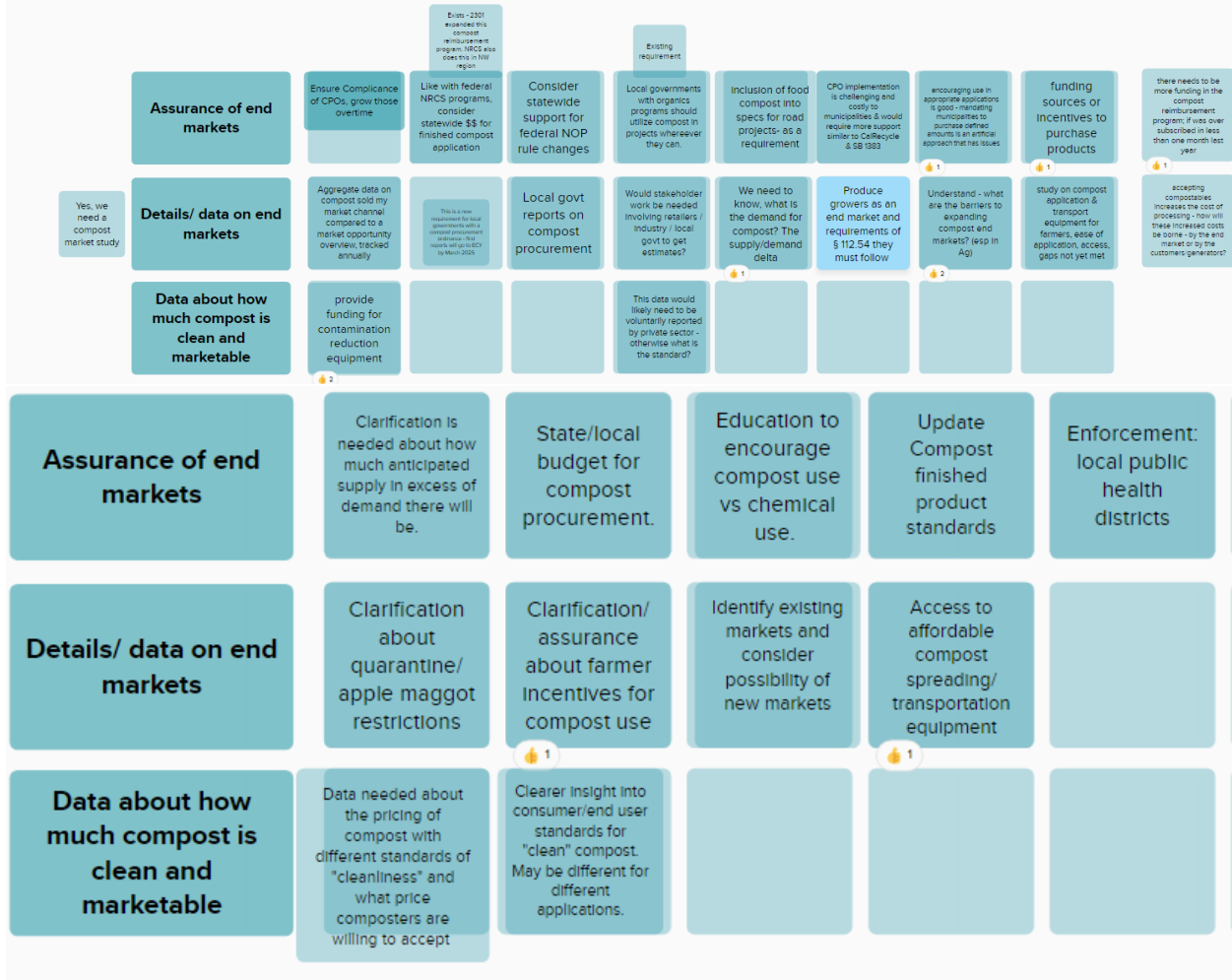
1. Does the list of initial solutions generated by this committee resonate? Why or why not?

Compostable Products Advisory Committee Meeting #7

Assurance of end markets	makes sense, but how would this happen? No one wants to buy contaminated compost. I suppose thresholds would have to be set. 👍 2	If pushing to use more compost that may have more contamination, financial incentive to purchase & apply then		Yes, with HB 1799/ 2301 WA will produce significantly more compost and markets will be needed.	currently, the market drives how clean compost must be - if it is contaminated, it will be of lower value or not sellable. Trying to create assurance of markets seems artificial and not sure how this would work. 👍 1	I hear a lot of complaints from end users about how they are finding plastic, glass, etc. in compost they buy. Even if it happens only once, they remember that for a long time. Improved quality as experienced by the customer (aka less contamination of the end product). I think, will go a long way.
Details/ data on end markets	Yes, we don't have enough insight into price/ton per market and total tonnage moving into specific market channels	how far are some of the end markets from the manufactured compost?	Market details are always helpful to better understand product marketability 👍 1	May be helpful, but we already know there are not sufficient markets for all material + additional material produce due to new collection mandates		
Data about how much compost is clean and marketable	Would like to better understand the pressures in WA to OMRI certify compost, and the potential for updated NOP rules to benefit composters	How clean does compost have to be - what is the standard for this?	According to which standards? WSDOT, STA., etc	Sure, and conversely the amount and percentage that is not marketable		Crucial to know what end markets there are.. and how "clean" they need to be 👍 1
	Mandates to accept compostable products - does not resonate	Feeling like there is a disconnect in the way we talk about compostability				
Assurance of end markets	High level solution	Need assurance of organics certification with Compostable products	Add testing of compost to assure quality and limits on contaminants (microplastics or chemical or other?)	Market development through education and policy	CA 1383: composters sitting on finished compost that they can't sell now that they're taken in so much material. Beyond scope of this process, but a consideration	CA has grant program for farmers (similar to WA)
Details/ data on end markets						
Data about how much compost is clean and marketable	Yes, but need to include cost to reach "clean and marketable" 👍 1	are paper contaminants visible or not? is it marketable or not?			This is a need vs. solution 👍 1	
	Depends on the color of the products before the process.	For ex. produce stickers do not look like stickers after the compost process				

2. How would you build these out and further define them?

Compostable Products Advisory Committee Meeting #7



3. What is missing from the list of solutions?



Compostable Products Advisory Committee Meeting #7

conduct research and associated education for how to best degrade compostable products (e.g., which process conditions are most important and how to achieve that)		compostables in EPR, needs higher accountability, not on end users		Are compostable products as great as we think? 1	Are certain compostable products critical to collecting food waste? 1
	Addressing organic ag rules that handicap composters	How about different 'grade' levels for compost to indicate product quality?	A way to clarify recyclable and compostable as folks can't tell the difference 3		clarification that even if they work in a system they may not be accepted
Strong enforcement of non-compliant products being sold in WA state 3	should this be the main focus of our pursuit of organics management in the state? Maybe more impactful things to address with available time and energy...? 1		It is difficult to focus on the specifics of this solution without knowing the more holistic approach and if there will be variability between different regions or a statewide requirement		