

REQUEST FOR ACTION

To: Rachel Machi Wagoner
Director

From: Cara Morgan
Deputy Director, Materials Management and Local Assistance

Request Date: December 19, 2023

Decision Subject: AB 1201 Bifurcated Collection Determination

Action By: December 31, 2023

Summary of Request

Assembly Bill (AB) 1201 (Ting, Chapter 504, Statutes of 2021) requires CalRecycle to determine, through a public process to be completed by January 1, 2024, whether it would be feasible to separate the collection of products that are not acceptable compost feedstocks under the U.S. Department of Agriculture (USDA) National Organic Program (NOP) from collection of organic wastes that are acceptable compost feedstocks under the NOP and enable processing that can be done efficiently to recover organic waste in both streams.

Background

AB 1201 restricts when products could be labeled "compostable." by requiring products labeled with the term "compostable" or "home compostable" be designed to be associated with the recovery of desirable organic wastes that are collected for composting and be an acceptable compost feedstock for organic agriculture under the US Department of Agriculture's (USDA) National Organic Program (NOP).

AB 1201 further requires CalRecycle to determine, through a public process to be completed by January 1, 2024, whether it would be feasible to separate the collection of products that are not acceptable compost feedstocks under the NOP from collection of organic wastes that are acceptable compost feedstocks under the NOP and enable processing that can be done efficiently to recover organic waste in both streams. Feasibility requires that products labeled "compostable" that are not suitable as compost feedstocks for use in organic agriculture will be recovered, not disposed.

PRC Section 457(g)(1)(B) further states that "if the department determines that such bifurcation is feasible and would enable efficient processing by solid waste processing facilities, the department shall adopt regulations on or before January 1, 2026, to establish a bifurcated approach, and products that are not collected for the purpose of recovering organic waste that is suitable for use in organic agricultural applications shall comply with the department's regulations and are not subject to the requirements of this

subparagraph.” In other words, if CalRecycle determines it would be feasible to establish a separate collection system for products not appropriate as an input for compost used in organic agriculture and enable processing that can be done efficiently to recover organic waste, it would be required to adopt requirements specific to such products, and the NOP requirement described above would not apply to such products.

If CalRecycle does not determine that it is feasible to collect products separately and enable processing that can be done efficiently to recover organic waste in both streams, it will be illegal, as of January 1, 2026, to sell products in California that are labeled “compostable” or “home compostable” unless those products are acceptable compost feedstocks under the NOP and satisfy the other applicable requirements of PRC 42357.

Public Process

Discussion Paper and Composter Survey

As part of the process to engage the public in this determination, on October 16, 2023, CalRecycle posted the *Discussion Paper for Assembly Bill (AB) 1201 Public Workshop: Organic Waste Bifurcation Feasibility Determination (Discussion Paper)*, summarizing the results of a survey staff conducted in June 2023 of the 34 mixed material composting facilities that were permitted in California. Mixed material composting facilities were selected for the survey because those facilities may have permits that would allow the receipt and processing of some products. The Discussion Paper can be found in Attachment 1.

The survey collected data about paper, fiber, and plastic products that composters intentionally incorporate into their finished compost. Twenty-four facilities responded to the survey (a 70 percent response rate). Overall, the results indicate that:

- The vast majority of mixed material composting facilities accept *uncoated* paper and fiber products for processing into finished compost.
- The compost facilities do not currently accept any plastic products for processing into finished compost.

The following are highlights from the compost survey:

1. Most respondents accept and process uncoated paper products into finished compost.
2. While a few respondents accept plastic or plastic-containing materials, none of them incorporate these materials into finished compost.
3. Feedstock contamination is the most common concern for composting facilities that accept food waste.
4. Adding infrastructure to process a separate stream would be expensive and difficult for composting facilities. The majority of facilities stated that they could

not feasibly process the separate stream.

As part of the survey, composters were asked if it would be feasible to process and recover two separate organic waste streams. The following are the results:

- 63 percent stated that it would not be feasible.
- 37 percent said it would be feasible; one-third of those respondents said it would create additional contamination concerns, would be expensive to implement, or both.
- 79 percent stated that adding a separate stream would increase operational costs by more than 20 percent.

The following are conclusions based on the survey results:

1. While markets clearly exist for compost that incorporates uncoated paper and paperboard products, it is not clear that there is a market for compost that intentionally incorporates plastic or plastic-containing products.
2. Composting facilities have already made significant investments in operational capacity and labor to implement SB 1383. Adding another organic stream for them to process will significantly increase the amount of additional investment needed.
3. Bifurcated collection of products would not enable the current solid waste processing infrastructure to efficiently process and recover products that are not allowable compost inputs under the NOP.

Public Workshop

CalRecycle conducted a public workshop on November 1, 2023, and presented the results of the survey. Twenty-one interested parties attended the workshop in person, and more than 200 individuals participated remotely. During the workshop, 22 individuals provided oral comments. Staff received written comments after the workshop from 17 individuals. Commenters included jurisdictions, composters, haulers, product manufacturers, non-governmental organizations, and the secretary of the National Organics Standards Board (NOSB). All written comments received by the department are in Attachment 2.

During the workshop, interested parties were encouraged to provide additional data that should be factored into the determination. While the department received numerous comments, we received no data to assist in our feasibility determination. The department did not, for example, receive any data that might support a finding that bifurcated collection of organic waste would result in efficient processing and recovery of products that are not acceptable compost inputs under the NOP.

The tables below organize the comments received into six topics: (1) Efficient Collection and Processing, (2) Plastic Contamination, (3) Markets, (4) "Compostability," "Biodegradability," and "Disintegration," (5) Overlap with SB 54, and (6) Feasibility Determination. Each table provides summaries of both the oral and written comments that were received related to those topics.

Topic 1: Efficient Collection and Processing

Comment	Analysis
<p>Bifurcation of California's organic waste system would be extremely costly, inefficient, and impractical.</p> <p>Additional costs associated with the labor, vehicles, and containers necessary to collect a separate stream for actual processing and recovery doesn't seem feasible given the environmental impacts of additional trucks on the road and the increased costs.</p> <p>There would also be additional costs at composting facilities because composting equipment must be thoroughly cleaned between feedstocks or the facility's certifications may be jeopardized.</p>	<p>These comments are consistent with the composter survey results and suggests that bifurcation is not feasible.</p>
<p>Local governments and the solid waste industry have already made significant investments to implement SB 1383, and bifurcated collection would require additional investments.</p>	<p>This comment suggests that bifurcation is not feasible.</p>
<p>Bifurcation would exacerbate collection challenges in rural and low population counties. Ultimately, these costs get passed on to ratepayers, which is a misuse of scarce ratepayer resources.</p>	<p>This comment is consistent with the composter survey results and suggests that bifurcation is not feasible.</p>
<p>Separating collection would likely have the unintended consequences of increasing greenhouse gas emissions due to increased truck trips and increased contamination due to generator confusion.</p>	<p>This comment suggests that bifurcation is not feasible.</p>

Due to the relatively small volume of compostable plastic products in the stream of commerce, a commercially viable market is highly improbable and an attempt at building a bifurcated system would be a significant societal cost burden without a corresponding substantial environmental benefit.	This comment is consistent with the composter survey results and suggests that bifurcation is not feasible.
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Topic 2: Plastic contamination

Comment	Analysis
Compostable plastics are indistinguishable from the conventional, fossil-fuel derived plastics, which will result in the stream that accepts compostable plastics likely being riddled with contamination, increasing costs and potentially jeopardizing whatever end market was being utilized.	This comment is consistent with the composter survey results and suggests that bifurcation is not feasible.
Bifurcation would compel composters to change their procedures and accept materials they consider contamination.	This comment is consistent with the composter survey results and suggests that bifurcation is not feasible.
It should be noted there is a range of systemic solutions that are well-known and can be employed to reduce contamination, which includes education and outreach for all stakeholders, which has so far not taken place, but will also be funded under SB54.	This comment is not relevant to the feasibility determination.
Packaging continues to be misidentified, mislabeled or confused with other non-compostable products. There are lot of look-alike products in the market. Adding another collection container or collection process for compostable plastic will only serve to confuse the public and lead to further contamination of the organic waste streams.	This comment is consistent with the composter survey results and suggests that bifurcation is not feasible.
Processing a separate stream would	This comment is consistent with the

increase costs for rural counties by more than 20% and that bifurcation would increase labor costs and require significantly increasing processing capacity (and dedicated facility space) to handle two different organic streams to avoid contamination.	composter survey results and suggests that bifurcation is not feasible.
These products become contaminants and impact not only the ability to market the final compost product but could also affect critically important certifications held by many of the facilities (i.e., OMRI, CDFA, etc.).	This comment is consistent with the composter survey results and suggests that bifurcation is not feasible.
Given the gravity of concern about contamination from the survey respondents (54% concern, 33% top concern), how will CalRecycle be taking steps to improve education and communication with all stakeholders to reduce contamination by conventional plastics in post-consumer feedstocks?	The SB 1383 regulations require jurisdictions to provide education and outreach to organic waste generators regarding requirements to properly separate materials in appropriate containers. The regulations also require jurisdictions to implement contamination monitoring procedures that include route reviews and/or waste evaluations. This comment is not relevant to the feasibility determination at issue.
The root cause of contamination is a lack of consumer awareness, which is best addressed with better education and consumer friendly programs (both of which can and should be addressed using funding generated by SB 54).	The SB 1383 regulations require jurisdictions to provide education and outreach to organic waste generators regarding requirements to properly separate materials in appropriate containers. The regulations also require jurisdictions to implement contamination monitoring procedures that include route reviews and/or waste evaluations. This comment is not relevant to the feasibility determination at issue.
Contamination removal is necessary before, during, and after the composting process. Removal of contamination is costly and further complicated by look-alike materials.	This comment is consistent with the composter survey results and suggests that bifurcation is not feasible.

Topic 3: Markets

Comment	Analysis
<p>The feasibility analysis should consider that after bifurcation, non-NOP feedstock organics would still have to be blended with other inputs in order to produce compost. Those other inputs would likely have to be diverted from the production of more marketable NOP-compliant compost production to produce an inferior product that is far less marketable.</p>	<p>The practical challenges identified in this comment concern whether efficient processing to recover organic waste is feasible. In other words, even with bifurcated collection and processing, a separate stream containing plastics might still need to be combined into a compost pile with other, NOP-compliant feedstock for it to fully compost. The inefficiency of collecting waste separately only to combine it again at a composting facility would suggest that bifurcation would not enable efficient processing by solid waste facilities.</p> <p>CalRecycle received no information or evidence establishing that such challenges and inefficiencies could be avoided.</p>
<p>The feasibility analysis should consider whether there will be adequate demand for non-NOP compliant compost. Many facilities have focused on production of organic compost because it commands a higher price and is in greater demand than nonorganic compost. It is not clear that there would be sufficient demand for non-NOP compost in the marketplace.</p> <p>Why take on the challenge and associated impacts (traffic & vehicle impacts, energy consumption, public education hurdles, etc.) associated with a bifurcated collection system if there is a high probability of the materials not being recycled due to the lack of an end market?</p>	<p>This comment suggests that efficient processing to recover organic waste is not feasible.</p>
<p>Compostable plastics are impossible to distinguish from non-compostable</p>	<p>This comment is consistent with the composter survey results and suggests</p>

products, do not degrade during industrial composting cycle timeframes, and contain contaminants that would negatively affect product quality and marketability.	that bifurcation is not feasible.
<p>Commercial compost customers demand quality material to help manage crop nutrients and support soil health. We meet this demand by ensuring our compost products meet or exceed stringent state and federal standards for use in agricultural applications.</p> <p>Importantly, many commercial customers prefer our OMRI listed, or other California Department of Food and Agriculture registered organic input compost as this material helps the customer to maintain their "organic product" certification.</p> <p>Maintaining organic certification and viable markets will prove even more difficult for material that includes "compostable" plastics.</p>	This comment is consistent with the composter survey results and suggests that bifurcation is not feasible.

Topic 4: "Compostability," "Biodegradability," and "Disintegration"

Comment	Staff Analysis
<p>Certified compostable products are proven to be fully biodegradable and are prevented from including intentionally added PFAS by virtue of not only the certification, but also by California legislative language which has been passed and can be found in statute.</p> <p>When studies are conducted, even in modern high-throughput processes, it is shown that certified compostable products readily disintegrate.</p>	Regardless of the rate at which certified compostable products disintegrate, the rate would not mitigate the concerns raised by survey respondents or the problem that no composting facilities incorporate such products into marketable compost. As such, this comment and the information provided in support of it do not support a finding of feasibility.
Claims that biodegradable plastics do not biodegrade in the time frame were presented with zero supporting evidence	AB 1201 does not require CalRecycle to conduct testing of specific feedstocks at each compost facility. Rather, it required

<p>are unsubstantiated misperceptions. CalRecycle must confirm these claims by conducting testing at each of these facilities.</p>	<p>CalRecycle to conduct a public process, through which interested parties could provide data, test results, or any other relevant information, such as information concerning the efficiency of processing by solid waste processing facilities.</p> <p>Information received by CalRecycle suggested that some plastics claimed to be compostable may degrade more rapidly than others. However, such information does not negate survey respondents' assertions that plastics and plastic-containing materials do not biodegrade within the specific timeframes required by their composting cycles.</p>
<p>The purpose of certified compostable products is to act as a tool to divert organics; it has been shown that use of certified compostable products can increase participation in organic waste diversion programs, to support increased diversion of post-consumer food waste.</p>	<p>Whether or not certified compostable products increase recovery of food waste is not relevant to the question of whether bifurcated collection would result in efficient processing and recovery of those products. According to the composter survey results, composting facilities consider most certified compostable products to be contamination and remove them as such, with the exception of some paper products. As such, this comment does not support a finding of feasibility.</p>
<p>The compostable product manufacturing industry has overused and misused the terms "compostable," "biodegradable," and "biopolymer." It is evident that relying solely on a lab-designed ASTM standard falls short of ensuring these crucial criteria are met.</p>	<p>The appropriateness of relying on ASTM standards for whether products may be considered "compostable" is not relevant to the feasibility determination at issue.</p>
<p>A third-party review and analysis highlighting the positive impact of broad PHA usage on the environment was provided.</p>	<p>Staff reviewed the report and determined that it does not provide relevant information regarding the question of whether bifurcated collection would result in efficient processing and recovery of those products. Moreover, according to the composter survey results, composting facilities consider products made with</p>

	PHA to be contamination and remove them as such. This comment does not rebut the survey responses or suggest that the bifurcation at issue is feasible.
Composting is generally designed to manage organic waste, like yard clippings and food waste, and currently is not the ideal management option for plastic waste, even if it is technically "compostable."	This comment is consistent with the composter survey results and suggests that bifurcation is not feasible.
We have competent and reliable scientific evidence using well accepted ASTM standards, as well as actual field testing, to definitively establish that our certified products biodegrade in an acceptably short time frame without creating microplastics.	Data was not provided to support the comment that certified products biodegrade in the time frame used by mixed material composting facilities in California. According to the composter survey results, composting facilities consider most certified compostable products to be contamination and remove them as such, with the exception of uncoated paper products. This comment does not rebut the survey responses or suggest that the bifurcation at issue is feasible.
External polymerization is the main issue when it comes to PLA materials being marketed as "compostable." And the standard used for determining this very generic term "compostable" requires very specific conditions that are not suited or available by most, if not all, composting facilities.	This comment is consistent with the composter survey results and suggests that bifurcation is not feasible.
CalRecycle should focus on choosing third-party certifiers and adopting labeling guidelines.	This comment is not relevant to the feasibility determination at issue.
Compulsory public consumption [of "compostable products"] cannot be the answer to enable a small universe of "compostable product" manufacturers to profit from introducing into the stream of commerce materials that are widely viewed as contaminants in the	This comment is not relevant to the feasibility determination at issue.

composting community and which are very difficult to differentiate from non-compostable plastics.	
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Topic 5: Overlap with SB 54

Comment	Staff Analysis
Funds generated by SB 54 were designed specifically to create or bolster end markets, and to support systems to manage certified compostable products including bifurcated ones if necessary.	The degree to which funding that may be generated by SB 54 in the future will support bifurcated support systems is not relevant to the question of whether it is currently feasible to bifurcate collection of products and enable efficient processing and recovery. As such, it need not be considered.
CalRecycle did not inform the survey participants that the additional cost associated with accepting certified compostable products will be covered under SB 54.	SB 54 funding is not relevant to the requirement in AB 1201 that bifurcated collection must result in efficient processing and recovery of those products into marketable compost. Moreover, the effect of funding that may be generated by SB 54 in the future is not relevant to the question of whether it is currently feasible to bifurcate collection of products and enable efficient processing and recovery. As such, survey participants' awareness of SB 54 is immaterial.
With the passage of SB 54, there is now a clear path forward on how to remedy concerns about capacity and lack of funding for composters accepting certified compostable products.	This comment is ancillary to the determination. How SB 54 might affect capacity and funding for composters in the future is not relevant to the question of whether it is currently feasible to bifurcate collection of products and enable efficient processing and recovery. As such, this comment need not be considered.
While it is evident from the survey results that composters feel bifurcated systems require special logistics and financing, the survey failed to mention that SB 54	This comment is ancillary to the determination. How SB 54 might affect end markets and the processing of products in the future is not relevant to

designated funds specifically to create or bolster end markets for composters and support the processing of certified compostable products.	the question of whether it is currently feasible to bifurcate collection of products and enable efficient processing and recovery. As such, this comment need not be considered.
A significant number of composters indicate that it would be feasible. The cost concerns expressed by a small portion of these respondents in the 'yes' group can be alleviated by the funding that will be available through SB 54.	Data was not provided to support this comment, which contradicts the findings of the composter survey. SB 54 funding is not relevant to the requirement in AB 1201 that bifurcated collection must result in efficient processing and recovery of those products into marketable compost. As such, this comment does not support that bifurcation is feasible.

Topic 6: Feasibility Determination

Comment	Analysis
Until NOP regulations are updated, it is imperative that CalRecycle keep the door open for compostable plastic alternatives to plastic single-use packaging in applications where there are simply no suitable alternative material types that will not be destined for landfill.	This comment is not relevant to the feasibility determination at issue.
The feasibility study does not include any review of the collection system and whether the bifurcated collection of organic waste is even feasible, which we would argue is not without a monumental increase in costs and complexities.	CalRecycle's analysis focused on whether bifurcated collection would result in efficient processing and recovery of products into marketable compost. If efficient processing and recovery of products is not feasible, then collecting those materials separately for efficient processing and recovery is not feasible, or reasonable. To the extent the comment's assertion is accurate, it suggests that bifurcation is not feasible.
Bifurcation feasibility is, by definition, the capability to divide streams of incoming plastics. It's already challenging for the recycling industry to differentiate from	This comment is consistent with the composter survey results and suggests that bifurcation is not feasible.

"recyclable" to non-recyclable or "wishcycled" materials. So, we can't imagine the process ever working properly for composters.	
There was a composting facility in California that attempted to process PLA and other compostable plastics separately years ago and they attempted to keep it separated from their OMRI based organics feedstock. That project failed and they are no longer attempting to process that material separately.	The example provided by this comment is consistent with survey responses and with other comments raising concerns over the feasibility of efficient processing.
We ask for the time and opportunity to complete our research on the successful Italian Biomaterial composting scheme. It is currently under review by the EU government in Brussels and looks to be adopted across all members. We'd like to present our findings to the CalRecycle members (Est. Q3 2024).	AB 1201 requires CalRecycle to make a determination by January 1, 2024. CalRecycle would welcome the presentation of such findings when available. Comment is ancillary to the determination.
Last, we therefore ask for the AB1201 decision to be delayed long enough for the [NOSB] to review the facts and for our industry a chance to provide the evidence needed to support our claims.	AB 1201 requires CalRecycle to make a determination by January 1, 2024. CalRecycle will monitor any actions taken by the NOSB but does not have authority to delay its statutory deadline.

CalRecycle evaluated all comments and additional documents that were received, which are included in Attachment 2. No data was provided that demonstrates that bifurcated collection is feasible and would enable efficient processing and recovery of organic waste using the current organic waste processing infrastructure in California.

Action

Pursuant to PRC section 42357(g)(1)(B), I hereby:

- ☐ Determine that it is feasible to separate the collection of products in order to recover organic waste that is suitable for use in organic agricultural applications from the collection of products not suitable for use in organic agricultural applications, and direct staff to initiate a rulemaking process to adopt regulations that establish such bifurcated collection.
- ☒ Determine that it is not feasible to separate the collection of products in order to recover organic waste that is suitable for use in organic agricultural applications from the collection of products not suitable for use in organic agricultural applications.

- ☐ Conclude that the available evidence and information are insufficient to support a determination that it would be feasible to separate the collection of products in order to recover organic waste that is suitable for use in organic agricultural applications from the collection of products not suitable for use in organic agricultural applications.

Dated: 12/21/23

Signed by Rachel Wagoner, Director

Attachments:

Documents listed below are posted to CalRecycle's website. To request documents that are referenced in this report, but are not listed below, please submit a [Public Records Act Request](#).

1. *Discussion Paper for Assembly Bill (AB) 1201 Public Workshop: Organic Waste Bifurcation Feasibility Determination*
2. AB 1201 Public Workshop Comments