

# FINAL STATEMENT OF REASONS

## SUSTAINABLE PACKAGING FOR THE STATE OF CALIFORNIA ACT OF 2018

May 2021

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## UPDATE TO THE INITIAL STATEMENT OF REASONS

**Note:** If a subsection required an update from the original text in the Initial Statement of Reasons, it is noted in the heading. Additions made to the Initial Statement of Reasons are identified by underlined text. Deletions made to the Initial Statement of Reasons are identified by ~~strikeout~~. However, changes that are strictly non-substantive in nature, such as grammatical or punctuation corrections, are not identified.

### TITLE 14. NATURAL RESOURCES

#### DIVISION 7. DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY

#### CHAPTER 4. RESOURCE CONSERVATION PROGRAMS

#### ARTICLE 8. SUSTAINABLE PACKAGING FOR THE STATE OF CALIFORNIA

##### **PROBLEM ADDRESSED BY AND BENEFITS OF THE REGULATION – No Update**

Packaging comprises an estimated 26 percent of the waste disposed in California, and single-use food service packaging is a significant component of these discards, according to the Department of Resources Recycling and Recovery's (department) 2014 waste characterization study.<sup>1</sup> In 2018, the statewide recycling rate was estimated at 40 percent,<sup>2</sup> well below the department's goal of 75 percent by 2020, indicating that further efforts are needed to meet the state's recycling goal. Reducing the amount of packaging disposed will help the department meet its goal of 75 percent recycling, composting, or source reduction of solid waste ~~by 2020~~, as required by Assembly Bill (AB) 341 (Chesbro, Chapter 476, Statutes of 2011).

Additionally, non-recyclable or non-compostable food service packaging is a contaminant when it is placed in a recycling or composting container, reducing the effectiveness of ~~these~~ statewide programs. For example, non-recyclable food packaging that is placed in a recycling container may impact the physical properties of recyclable materials collected through the program and harm the overall economic and technical viability of the recycling program.

Improperly discarded single-use food service packaging contributes to environmental pollution, adversely impacts wildlife, and poses potential health risks to communities across the state. Efforts to increase the recovery of packaging will improve the statewide recycling rate and will have the additional benefit of reducing litter and its negative impacts to the environment. According to the National Oceanic and

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<sup>1</sup> CalRecycle. 2014 Disposal-Facility-Based Characterization of Solid Waste in California. 2015. <https://www2.calrecycle.ca.gov/Publications/Download/1301>

<sup>2</sup> CalRecycle, State of Disposal and Recycling in California: Calendar Year 2018. 2018. <https://www2.calrecycle.ca.gov/Publications/Details/1662>

Atmospheric Administration (NOAA), approximately 80 percent of marine debris comes from land-based sources, with food and beverage packaging making up the largest component of that debris.<sup>3</sup> These types of food service packaging materials can enter the marine environment through inefficient or improper waste management, intentional or accidental littering, and through stormwater runoff. Moreover, the chemicals found in some food service packaging may pose public health and wildlife impacts through potential exposure risk to toxic ingredients that are released from packaging into soil, compost, and water.

Senate Bill (SB) 1335 (Allen, Chapter 610, Statutes of 2018), the Sustainable Packaging for the State of California Act of 2018 (Act), requires food service facilities located in a state-owned facility, a concessionaire on state-owned property, or a business under contract to provide food service to a state agency to dispense prepared food using food service packaging that is reusable, recyclable, or compostable. The Act further requires the department to establish criteria and a process for determining the types of food service packaging that are reusable, recyclable, or compostable. The department must publish a List of Approved Food Service Packaging (List) within 90 days of the regulation being approved and evaluate the List to add or remove products at least once every 5 years.

The Act is intended to address the above problems by requiring that state facilities only use food service packaging items that are reusable, recyclable, or compostable. The regulation implementing SB 1335 will result in the following benefits to public health and the environment:

1. Reduction of litter and cleanup costs, improved water quality, and reduced impacts to wildlife: Increasing the use of reusable, recyclable, or compostable food service packaging items in state facilities will result in less litter in the state's waterways and marine environments where it harms wildlife and destroys habitats. Reducing litter cleanup costs will help alleviate the burden on local communities. The department estimates \$300,000 in annual litter cleanup costs may be saved as a result of reducing the amount of non-recyclable food service packaging used at food service facilities.
2. Increase recovery and reuse: Materials that have robust recycling markets are more likely to be collected for recovery. Much of the food service packaging currently sold in the state, despite labeling claims of "recyclable" or "compostable," are not compatible with California's infrastructure and are often contaminants that negatively impact recycling and composting

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<sup>3</sup> National Oceanic and Atmospheric Administration Marine Debris Program. Preventing Marine Debris at the Source. 2020. <https://marinedebris.noaa.gov/prevention/rethink-disposable-preventing-marine-debris-source>

- programs. The criteria required by the Act and regulations will help harmonize recovery and reuse requirements throughout the state and will help the state in achieving its 75 percent source reduction, recycling, and composting goal.
3. Reduction in greenhouse gas emissions: Materials that can be composted and are accepted at compost facilities are more likely to be diverted from landfills. Diverting compostable food service packaging and the associated food waste to compost facilities will help the department achieve its organic waste diversion goals and reduce greenhouse gas emissions associated with landfilling organic materials, as required by SB 1383 (Lara, Chapter 395, Statutes of 2016).
  4. Reducing toxic chemicals in food service packaging items: Certain chemicals, such as per- and polyfluoroalkyl substances, can be harmful to humans and wildlife. The regulations will reduce the amount of these chemicals contained in food service packaging. The magnitude of the reduction in toxic chemicals is unknown, but the reduction will have positive environmental and public health benefits.

#### **GENERAL COMMENTS APPLICABLE TO STATEMENT OF REASONS – No Update**

SB 1335 and the proposed regulation will further the department's ability to meet its statewide recycling and diversion goals by establishing new food service packaging requirements on state food service facilities that will increase the distribution of food service packaging that is compatible with California's recycling and composting streams. Specifically, the Act requires the department to evaluate food service packaging items based on criteria unique to the state (such as existing infrastructure, material markets, material composition, and potential environmental impacts) to ensure that only reusable, recyclable, or compostable packaging is used by state facilities.

#### **SPECIFIC PURPOSE AND NECESSITY OF REGULATIONS**

The First Draft Proposed Regulations was noticed as part of the Notice of Proposed Rulemaking submittal to the Office of Administrative Law and was presented for stakeholder comment during the 45-Day Comment Period. The comment period was originally scheduled to be held from March 13, 2020, through April 28, 2020; however, it was extended due to the COVID-19 public health emergency through May 21, 2020.

The Second Draft Proposed Regulations was noticed in October 2020 as part of the Initial 15-Day Comment Period and included revisions to the First Draft Proposed Regulations that addressed stakeholder comments received during the 45-Day Comment Period.

The Third Draft Proposed Regulations was noticed in December 2020 as part of the Second 15-Day Comment Period and included revisions made to the Second Draft Proposed Regulations in response to stakeholder comments received during the Initial 15-Day Comment Period.

The Final Version of the Proposed Regulations includes non-substantial edits to the Third Draft Proposed Regulations. CalRecycle describes these non-substantial changes in the section titled NON-SUBSTANTIAL CHANGES MADE PRIOR TO THE FINAL VERSION OF THE PROPOSED REGULATIONS. Additionally, an error in subsection 17989.5(a)(1)(A) was corrected, as described.

“Authorizing statute” or “statutory requirements” or “SB 1335” refers to Chapter 6 of Part 3 of Division 30 of the Public Resources Code.

“CalRecycle” or “the department” refers to the California Department of Resources Recycling and Recovery.

## **SUMMARY OF POLICY CHANGES MADE THROUGHOUT THE RULEMAKING PROCESS**

### **Major Changes in the Second Draft Proposed Regulations:**

#### Section 17989

- Added definitions for “composting,” “large volume transfer/processing facility,” “mixed material,” and “organic waste.”
- Edited the definition of “compost facility” to align with California Code of Regulations Division 7, Chapter 3.1, Article 1, Section 5 17852, subsection (a)(12).
- Clarified the definition of “food service facility” by providing additional examples.
- Edited the definition of “material” to include identifying characteristics, such as material form.
- Removed the requirement in the definition of “safe and timely manner” that a food service packaging item achieve biodegradation “in the active compost process”; moved the 90 percent biodegradation within 60 days requirement so it applies directly to lab tests under section 6.2 of ASTM D6400-19 or D6868-19, as applicable. Added a requirement to the definition of “safe and timely manner” that a food service packaging item must disintegrate 90 percent within 60 days, following ASTM D6400-19 or ASTM D6868-19 section 6.3, as applicable.
- Expanded the definition of “third-party certification entity” to include entities that have executed a contract with an ISO/IEC 17025:2017 accredited laboratory.

### Section 17989.1

- Added information (the type, name, and size of a food service packaging item) that must be included in the description of items on the List of Approved Food Service Packaging (List) and reorganized requirements for size and volume.
- Added a requirement that the List include a section that identifies materials that the department determines have met certain recyclable or compostable criteria.
- Moved the requirement that food service packaging manufacturers submit a new application within 30 days of making non-aesthetic changes to an item on the List to Section 17989.6.
- Added procedural requirements that the department must follow before removing a food service packaging item from the List if it determines an item no longer meets the requirements of the regulation.
- Added a requirement that the department will notify a food service packaging manufacturer when a chemical that may be used in food service packaging is identified pursuant to subsection 17989.2(a)(1) (Toxics in Packaging Prevention Act), subsection 17989.2(a)(2) (Proposition 65), or subsection 17989.2(a)(4) (reports and publications), and specified the manufacturer will have 60 days to provide information to the department.
- Added procedural requirements that the department must follow when it reevaluates the List at least once every five years.

### Section 17989.2

- Added procedural requirements that the department must follow to remove a food service packaging item from the List due to its potential to contribute to an adverse public health impact.
- Added procedural requirements that the department must follow to remove a food service packaging item from the List that is restricted via a local ordinance, due in part to litter or ocean debris concerns.

### Section 17989.3

- Increased the minimum wash cycle requirement for reusable food service packaging items from 125 to 780.

### Section 17989.4

- Revised the collection and recycling threshold requirements for recyclable food service packaging items to 60%. These thresholds increase to 75% in 2026.

#### Section 17989.5

- Revised the collection and acceptance threshold requirements for compostable food service packaging items to 50%. These thresholds increase to 75% in 2026.
- Specified that products labeled “compostable” must comply with California laws concerning environmental marketing claims. Those laws incorporate standards contained in the “Guides for the Use of Environmental Marketing Claims” published by the Federal Trade Commission.

#### Section 17989.6

- Clarified that the application for food service packaging items must include additional descriptive information and specified the timeframe for applicable lab tests to be completed.
- Added that an applicant must provide an explanation of how test results are applicable for all items within a group, if the test results are being submitted for a group of food service packaging items
- Clarified that applicants must submit a statement that their food service packaging items comply with labeling requirements in the California Business and Professions Code.
- Clarified the process the department will follow to review applications and notify applicants of the status of applications.
- Clarified that an applicant may provide additional documentation or information to the department for consideration prior to finalizing its determination of whether the applicant’s food service packaging item or items meet the applicable requirements.

#### **Major Changes in the Third Draft Proposed Regulations:**

#### Section 17989

- Clarified that the List will include a separate section of materials that CalRecycle has deemed to meet certain recyclable and compostable criteria.
- Clarified that the definition of “material” refers to ingredients and the combination of ingredients, including the feedstocks used to construct the food service packaging item, and specified the detail with which certain materials must be described.
- Added the statutory definition of “prepared food” to clarify the meaning of “mass produced” and “cooking or food preparation techniques.”

- Clarified that the “Proposition 65 list” is the list published in the California Code of Regulations.
- Removed the definition of “safe and timely manner” and incorporated the requirement that a compostable food service packaging item achieve 90 percent biodegradation within 60 days directly into Section 17989.5.
- Removed the requirement that a compostable food service packaging item achieve 90 percent disintegration within 60 days.
- Revised the definition of “takeback program” to include compostable food service packaging items in order to align this subsection with a revision made to Section 17989.5.
- Removed the definition of “third-party certification entity” and replaced the term throughout the regulations with “ISO/IEC 17025:2017 accredited laboratory.”
- Added subsection (b) to include the publications incorporated by reference in the regulations.

#### Section 17989.1

- Revised the deadline by when a food service packaging manufacturer must submit an application to the department in order for its food service packaging item, or a group of items, to be evaluated for publication on the initial List.
- Clarified the process the department will follow when considering removal of food service packaging items from the List.
- Clarified that CalRecycle will notify a food service packaging manufacturer if it determines a food service packaging item may contain a chemical that is added to the definition of “regulated metals” under the Toxics in Packaging Prevention Act or is added to the Proposition 65 list.
- Clarified the procedural requirements the department will follow when it reevaluates the entire List at least once every five years.

#### Section 17989.2

- Revised the requirements regarding the Toxics in Packaging Prevention Act to align with requirements specified in that statute.
- Provided examples of analytical test instrumentation that may be used to measure total fluorine and specified that the test may only be conducted by an ISO/IEC 17025:2017 accredited laboratory.



- Clarified the criteria the department will consider and process the department will follow for removing a food service packaging item from the List based on its potential to contribute to litter or public health or wildlife impacts.

#### Section 17989.3

- Clarified that wash cycle test results must be completed by an ISO/IEC 1725:2017 accredited laboratory.
- Clarified that, if applicable, a manufacturer of a reusable food service packaging item shall provide an express, written warranty to the purchaser of the food service packaging item covering the item for a minimum of one-year.

#### Section 17989.4

- Specified the minimum size requirement for a recyclable food service packaging item.
- Clarified that recyclable materials must have sufficient commercial value to be marketed for recycling.
- Clarified the requirements relating to takeback programs, including the timeframe and ultimate disposition of the food service packaging item.

#### Section 17989.5

- Added an option for food service packaging manufacturers to use a takeback program for compostable food service packaging items.
- Revised the requirements for food service packaging items to compost in a “safe and timely manner”:
  - Clarified that the requirement applies to “plastic, plastic-coated, or plastic-containing” food service packaging items.
  - Revised the types of entities that must conduct the specified tests.
  - Added a criterion to specify food service packaging items must meet the requirements of the ASTM standards, as applicable.
  - Clarified that the 90% biodegradation within 60 days requirement must be demonstrated via the applicable test report, as required by the ASTM standards.
  - Removed the requirement that a compostable food service packaging item must achieve 90% disintegration within 60 days.

#### Section 17989.6

- Added a requirement that applications must specify the analytical method and instrumentation used to quantify total fluorine for applicable food service packaging items.
- Specified the information that a food service packaging manufacturer must submit in an application if it seeks to implement a takeback program.
- Specified how an applicant may demonstrate that a recyclable material has sufficient commercial value to be marketed for recycling.
- Increased the time allowed for completed ASTM D6400-19 or ASTM D6868-19 tests to be included in the application.
- Specified the type of documentation that demonstrates if a food service packaging item meets the requirements of ASTM D6400-19 or D6868-19.
- Specified that an application for “plastic, plastic-coated, or plastic-containing” food service packaging items must include a copy of the ASTM D6400-19 or ASTM D6868-19 test reports for those items demonstrating the percent biodegradation achieved at 60 days.
- Clarified that an application for a compostable food service packaging item must include a statement that the food service packaging item(s) meet the applicable California legal requirements for being labeled as “compostable.”
- Clarified that food service packaging manufacturers may provide CalRecycle with additional information and documentation within 30 days if their application is deemed incomplete or if a food service packaging item is deemed not reusable, recyclable, or compostable.
- Clarified that a new application shall be submitted prior to the continued sale of an approved food service packaging item if non-aesthetic changes are made to that item.

#### Section 17989.7

- Added the statutory requirement that food service facilities may only dispense “prepared food” in food service packaging items on the List.

#### Section 17989.8

- Clarified the requirements for a food service facility to provide purchasing records to the department upon written request.

## **§17989. Definitions.**

### **Subsection 17989(a) – Updated in the Third Draft Proposed Regulations**

The purpose of Section 17989 is to define terms used in the regulations that have a meaning which is not readily apparent without further clarification. This section is necessary as several technical and administrative terms appear in the Act and in the regulation that require more specific descriptions to assure regulatory consistency and clarity. Subsection (a) explains that the definitions contained in this section are provided as a supplement to the definitions contained in section 42370.1 of the Public Resources Code (PRC). This section is necessary to set forth the following definitions:

CalRecycle revised this subsection in the Third Draft Proposed Regulations to clarify how the definitions apply to these regulations and how they relate to those contained in PRC section 42370.

### **Subsection 17989(a)(1) – Updated in the Third Draft Proposed Regulations**

Subsection (a)(1) defines the term “accepted.” This subsection clarifies that a compost facility must knowingly accept a food service packaging item as feedstock to produce finished compost. This clarification is necessary because many food service packaging items are delivered to a compost facility along with associated food waste, but the food service packaging items are often identified as contaminants that are intentionally screened out for disposal. Disposal of a food service packaging item after it has entered the compost facility does not meet the definition of “accept.” This definition is needed for clarifying how to calculate the number of compost facilities that “accept” compostable food service packaging items for further processing and may be counted toward the compostable criterion of 50 percent (75 percent in 2026) of compost facilities that accept compostable food service packaging.

### **Subsection 17989(a)(2) – No substantive changes**

Subsection (a)(2) defines the term “aesthetic change.” This term is not defined in the Act but determines when a food service packaging manufacturer must submit a new application to the department as a result of a change it makes to a food service packaging item. This definition is necessary to distinguish when a modification to a food service packaging item constitutes an aesthetic change that does not impact its material composition or construction and therefore would not require a re-evaluation to determine if it still meets the criteria for inclusion on the List. However, a “non-aesthetic” change to a food service packaging item would require a manufacturer to submit a new application pursuant to Section 17989.6(g). This definition will allow a manufacturer to determine if it has made an aesthetic change to a food service packaging item which does not require submittal of a new application to the department for evaluation.

### **Subsection 17989(a)(3) – No substantive changes**

Subsection (a)(3) defines the term “collected.” This definition clarifies that after a food service packaging item has been used, it must be picked up and delivered to a recycling or composting facility. The definition is needed to establish a transparent, consistent definition for what constitutes collection for purposes of determining the percentage of recycling programs that collect food service packaging materials as required by Sections 17989.4(a)(3) and 17989.5(a)(1).

**Subsection 17989(a)(4) – New definition added in the Second Draft Proposed Regulations**

CalRecycle added subsection (a)(4), which defines the term “composting,” in the Second Draft Proposed Regulations to reference the existing definition of “composting” in PRC Section 40116.1. This subsection is necessary to clarify the use of the term throughout the regulations.

**Subsection 17989(a)(4) – Updated and renumbered to (a)(5) in the Second Draft Proposed Regulations**

Subsection (a)~~(4)~~(5) defines the term “compost facility.” This subsection is necessary to clarify the meaning of a compost facility by referencing existing definitions in the California Code of Regulations (CCR). The purpose is to maintain consistency in the department’s regulations and to align the department’s definitions with PRC Section 42370.2(e)(1) of the statutory requirements for the Act that describe compost facilities’ process and feedstock.

CalRecycle revised this subsection in the Second Draft Proposed Regulations to align the definition with CCR Division 7, Chapter 3.1, and removed the reference to in-vessel digestion facilities and operations. This change was made because these systems are not standardized due to the variability in anaerobic digestion technologies, and digested materials (including food service packaging) are typically required to undergo a secondary process to be fully composted. Including these facilities would incorrectly affect the percentage of facilities required to accept a compostable food service packaging material pursuant to section 17989.5 (a)(2). This change was prompted by stakeholder comments.

**Subsection 17989(a)(5) – Renumbered to (a)(6) in the Second Draft Proposed Regulations; no substantive changes**

Subsection (a)(6) defines “cooking or food preparation technique,” a term that is used in the statutory definition of “prepared food” as codified in PRC Section 42370.1(d). This definition provides a list of three categories of multiple techniques used to cook and prepare food and beverages, such as cooking food (e.g., roasting), preparing beverages (e.g., juicing), and preparing food (e.g., icing). This definition is necessary to clarify that many techniques are used to cook and prepare food and beverage products that result

in “prepared food” which would need to be served on reusable, recyclable, or compostable food service packaging, versus “mass produced” food, which is not subject to the requirements of the Act.

**Subsection 17989(a)(5)(A) – Renumbered to (a)(6)(A) in the Second Draft Proposed Regulations; no substantive changes**

Subsection (a)(6)(A) identifies examples of common cooking techniques. This subsection is necessary because the cooking techniques used by food service facilities are one of the fundamental components necessary to identify “prepared foods,” as required by the Act.

**Subsection 17989(a)(5)(B) – Renumbered to (a)(6)(B) in the Second Draft Proposed Regulations; no substantive changes**

Subsection (a)(6)(B) lists common beverage preparation techniques. This subsection is necessary to clarify that food service facilities must consider beverages as part of the food service packaging requirements, and that beverage preparation techniques are one of the fundamental components necessary to identify “prepared foods,” as required by the Act.

**Subsection 17989(a)(5)(C) – Renumbered to (a)(6)(C) in the Second Draft Proposed Regulations; no substantive changes**

Subsection (a)(6)(C) lists common food preparation techniques. This subsection is necessary because the food preparation techniques used by food service facilities are one of the fundamental components necessary to identify “prepared foods,” as required by the Act.

**Subsection 17989(a)(6) – Renumbered to (a)(7) in the Second Draft Proposed Regulations; no substantive changes**

Subsection (a)(7) defines the term “department” to mean the Department of Resources Recycling and Recovery. This definition is needed to clarify that “department,” as used in the regulation, refers to the Department of Resources Recycling and Recovery and not to the Department of General Services, which also bears responsibilities under the Act.

**Subsection 17989(a)(7) – Renumbered to (a)(8) in the Second Draft Proposed Regulations; no substantive changes**

Subsection (a)(8) further clarifies the statutory definition of “food service facility,” as codified in PRC Section 42370.1(b). This subsection is necessary to clarify that there are three types of State-related operations or businesses that are subject to the requirements of the Act. The definition provides specific examples to more clearly

describe what constitutes a food service facility for purposes of determining compliance with the Act.

**Subsection 17989(a)(7)(A) – Updated and renumbered to (a)(8)(A) in the Second Draft Proposed Regulations**

Subsection (a)(7)(8)(A) identifies examples of operations or businesses located in a state-owned facility. This subsection is necessary to define one of three scenarios (subsection (a)(8)(A), (B), or (C)) that identify whether an operation or business is considered a “food service facility” for purposes of the Act and provide illustrative examples.

CalRecycle revised this subsection in the Second Draft Proposed Regulations, per the request of stakeholders, to clarify additional common examples of operations or businesses that are located on state property, including: “California State University food courts,” “fairs,” and “expositions.”

**Subsection 17989(a)(7)(B) – Renumbered to (a)(8)(B) in the Second Draft Proposed Regulations; no substantive changes**

Subsection (a)(7)(8)(B) identifies that an operation or business operating on State property or acting as a concessionaire on State property is considered a “food service facility” if it also meets the requirements of subsection (a)(8). This subsection is necessary to define one of three scenarios that identify whether an operation or business is considered a “food service facility” for purposes of the Act.

**Subsection 17989(a)(7)(C) – Renumbered to (a)(8)(C) in the Second Draft Proposed Regulations; no substantive changes**

Subsection (a)(7)(8)(C) identifies that an operation or business under contract to provide food service to a State agency is considered a “food service facility” if it also meets the requirements of subsection (a)(8). This subsection is necessary to define one of three scenarios that identify whether an operation or business is considered a “food service facility” for purposes of the Act.

**Subsection 17989(a)(8) – Renumbered to (a)(9) in the Second Draft Proposed Regulations; no substantive changes**

Subsection (a)(8)(9) defines the term “food service packaging item.” This subsection is necessary to clarify that this definition refers to a specific combination of a food service packaging type (e.g., plate) and material (e.g., polyethylene terephthalate). It further specifies that the description of “material” must be specific to the type of plastic used to make the food service packaging item as opposed to describing the material more broadly as “plastic.” This subsection is necessary to ensure that food service packaging manufacturers provide the required information in the application submitted to the

department so that it can evaluate the functionality and composition of a food service packaging item against the applicable criteria for inclusion on the List.

**Subsection 17989(a)(9) – Renumbered to (a)(10) in the Second Draft Proposed Regulations; updated in the Third Draft Proposed Regulations**

Subsection (a)(9)(10) defines the term “food service packaging manufacturer.” This subsection clarifies that the entity responsible for submitting the information contained in an application to the department is the manufacturer of a food service packaging product. This is necessary because the food service packaging manufacturer possesses direct, first-hand and potentially proprietary knowledge of the materials used to make the food service packaging item and is responsible to test its product(s) to demonstrate it meets the applicable criteria.

CalRecycle revised this subsection in the Third Draft Proposed Regulations to clarify that food service packaging manufacturers may also be referred to as simply “manufacturer” throughout the regulations, and to specify that this definition includes “persons acting on the food service manufacturer’s behalf.”

**Subsection 17989(a)(10)(A) – Renumbered to (a)(11)(A) in the Second Draft Proposed Regulations; no substantive changes**

Subsection (a)(10)(11)(A) defines the term “food service packaging type” or “type of food service packaging.” This subsection is necessary to clarify the conditions under which a food service packaging product is used, whereby it meets the statutory definition of “food service packaging” pursuant to PRC Section 42370.1(c), and to provide the list of statutorily excluded types of food service packaging for ease of reference by the regulated community. A type of food service packaging must meet at least one of three minimum conditions stated in the following subsections to meet this definition and is subject to the requirements of the Act.

**Subsection 17989(a)(10)(A)(i) – Renumbered to (a)(11)(A)(i) in the Second Draft Proposed Regulations; no substantive changes**

Subsection (a)(10)(11)(A)(i) clarifies that a food service packaging type must come into direct contact with the prepared food or beverage to be considered a food service packaging type. This subsection is necessary to define one of three minimum conditions necessary to determine whether a type of food service packaging is subject to the requirements of the Act.

**Subsection 17989(a)(10)(A)(ii) – Renumbered to (a)(11)(A)(ii) in the Second Draft Proposed Regulations; no substantive changes**

Subsection (a)(10)(11)(A)(ii) identifies that a food service packaging type must keep the prepared food contained while transporting it on or off a food service facility’s premises.

This subsection is necessary to define one of three minimum conditions necessary to determine whether a type of food service packaging is subject to the requirements of the Act.

**Subsection 17989(a)(10)(A)(iii) – Renumbered to (a)(11)(A)(iii) in the Second Draft Proposed Regulations; no substantive changes**

Subsection (a)(~~10~~)(11)(A)(iii) clarifies that a food service packaging type must aid in the consumption of the prepared food or beverage. This subsection is necessary to define one of three minimum conditions necessary to determine whether a type of food service packaging is subject to the requirements of the Act.

**Subsection 17989(a)(10)(B) – Renumbered to (a)(11)(B) in the Second Draft Proposed Regulations; updated in the Third Draft Proposed Regulations**

Subsection (a)(~~10~~)(11)(B) provides clarifying examples of food service packaging types that are not subject to the requirements of the Act. This subsection is necessary to make the “food service packaging type” or “type of food service packaging” definition complete by also including specific food service packaging items that might otherwise meet the definition but are statutorily exempt.

CalRecycle revised this subsection in the Third Draft Proposed Regulations to clarify that the term “beverage containers” as used in this subsection has the same meaning provided in PRC section 42370.1(a).

**Subsection 17989(a)(11) – Renumbered to (a)(12) in the Second Draft Proposed Regulations; no substantive changes**

Subsection (a)(~~11~~)(12) defines the term “group of food service packaging items” or “group of items.” This definition clarifies that multiple food service packaging items made from the same material can be consolidated into a group and may be submitted in a single application by a person acting on behalf of food service packaging manufacturers. The purpose of this subsection is to define a term used in later regulatory provisions that are intended to reduce the administrative and financial burden that would otherwise be placed on individual food service packaging manufacturers to independently complete and submit applications for the same type of food service packaging product.

**Subsection 17989(a)(12) – Renumbered to (a)(13) in the Second Draft Proposed Regulations; no substantive changes**

Subsection (a)(~~12~~)(13) defines the term “hauler” by referencing the existing definition in CCR, Title 14 to maintain consistency in the department’s regulations. This subsection is necessary to clarify the term “hauler” as it is used in the regulations for the purposes of evaluating a recycling program under the recyclable criteria.



**Subsection 17989(a)(13) – Renumbered to (a)(14) in the Second Draft Proposed Regulations; no substantive changes**

Subsection (a)(13)(14) defines the term “jurisdiction” as having the same meaning as defined in PRC 40145 to maintain consistency between the department’s regulations and statute. This subsection is necessary in order to clarify that a jurisdiction, as it is used in the regulations, is the entity that must establish a recycling program as one of the criteria to determine recyclability.

**Subsection 17989(a)(15) – New definition added in the Second Draft Proposed Regulations**

CalRecycle added subsection (a)(15) in the Second Draft Proposed Regulations to define the term “large volume transfer/processing facility” by referencing California Code of Regulations Division 7, Chapter 3, Article 6.0, Section 17402, subsection (a)(8). This subsection is necessary to clarify the use of the term throughout the regulations.

**Subsection 17989(a)(14) – Renumbered to (a)(16) in the Second Draft Proposed Regulations. Updated in the Third Draft Regulations**

Subsection (a)(14)(16) defines the term “List of Approved Food Service Packaging” or “List.” This subsection designates the name of the department’s list that will identify food service packaging items that are reusable, recyclable, or compostable and will be published on the department’s website. This is necessary to ensure that food service facilities can readily find the List and verify they are purchasing compliant food service packaging items. The List also needs to be readily identifiable and accessible to the Department of General Services pursuant to PRC Section 42370.6(b).

CalRecycle revised this subsection in the Third Draft Proposed Regulations to specify that the List of Approved Food Service Packaging is the list published by the department pursuant to PRC Section 42370.3. Additionally, the department added subsections (A) and (B) in the Third Draft Proposed Regulations to clarify that the List includes the food service packaging items approved by the department and a list of materials that the department determines satisfy the criteria in subsection 17989.4(a)(3)(A) or 17989.5(a)(1)(A).

**Subsection 17989(a)(15) – Renumbered to (a)(17) in the Second Draft Proposed Regulations; no substantive changes**

Subsection (a)(15)(17) defines “mass produced,” a term that is used in the statutory definition of “prepared food” as codified in PRC Section 42370.1(d). This definition is necessary to clarify that “mass produced” means food or beverage products that are prepared for general sale by a third-party not affiliated with a food service facility as opposed to “prepared food,” which is subject to the Act. The purpose of this definition is

to clarify which types of food are mass produced and are not required to be served in food service packaging that is subject to the requirements of the Act and regulations.

**Subsection 17989(a)(16) – Updated and renumbered to (a)(18) in the Second Draft Proposed Regulations and updated in the Third Draft Proposed Regulations**

Subsection (a)(~~16~~)(18) defines the term “material.” This subsection is necessary to clarify what is meant by “description of the material(s) used” to manufacture a food service packaging item or group of items that must be included in an application submitted to the department pursuant to Section 17989.6(a)(4). This subsection specifies that a description of the material(s) must include the name of the feedstock used to make a food service packaging item and it includes several examples of types of feedstocks for clarity. This subsection further establishes that coatings or other ingredients, or combination of ingredients, used to manufacture a food service packaging item must be included in the description of the “material.” This is necessary because feedstocks, coatings, and other ingredients can affect the reusability, recyclability, or compostability of a food service packaging item and the department must be able to evaluate whether a food service packaging item meets the established criteria. This subsection also clarifies that a plastic material used to make a food service packaging item may be identified by its plastic polymer name, ~~or~~ by its corresponding #1-6 resin name pursuant to PRC Sections 18013-18015, excluding resin code #7, or both. Resin code #7 was excluded because that resin code is not defined as a specific material, may include multiple plastic polymers, and is of limited utility in determining if a material type is marketed for sale.

CalRecycle revised this subsection in the Second Draft Proposed Regulations to clarify that a food service packaging item could be described by its material feedstock and form. The department also added the option to describe a plastic material solely by, or with a combination of, the form and the name of the plastic resin number or the polymer name. The examples of a thermoform and bottle were added to the text. These changes were made because the department assessed it would need more detailed information to identify food service packaging items and materials that are collected, baled, and sold for recycling or transferred to composting facilities for processing by recycling programs.

CalRecycle further revised this subsection in the Third Draft Proposed Regulations to clarify that a “material” means a specific ingredient or “combination of ingredients” that partially or wholly constitute a food service packaging item. The modified definition also clarifies when a material must be described by its “identifying characteristics” and includes examples of ingredients (feedstocks, coatings, layers). This draft no longer specifies examples of “glass, ceramic, metal, fiber (i.e., derived from cellulose), or plastic” for feedstock type. These changes were necessary to provide stakeholders with a clear understanding of the details needed in a food service packaging item’s

application and in the list of “materials” that are deemed to be compliant with specified provisions in the recyclable and compostable criteria.

**Subsection 17989(a)(19) – New definition added in the Second Draft Proposed Regulations**

CalRecycle added subsection (a)(19) in the Second Draft Proposed Regulations to define the term “mixed material” by referencing Division 7, Chapter 3.1, Article 1, Section 17852, subsection (a)(26). This subsection is necessary to avoid ambiguity and improve clarity by adopting a definition that is already established in the regulations implementing the California Integrated Waste Management Act of 1989 with respect to composting.

**Subsection 17989(a)(17) – Definition removed in the Second Draft Proposed Regulations**

~~Subsection (a)(17) defines the term “on-site.” The version of the proposed regulations that was approved for noticing incorrectly includes this definition. This term is not used in the proposed regulations and may be removed during formal rulemaking.~~

CalRecycle removed this subsection, which defined the term “on site,” in the Second Draft Proposed Regulations as this term was unnecessary and not used in the regulations or statute.

**Subsection 17989(a)(20) – New definition added in the Second Draft Proposed Regulations**

CalRecycle added subsection (a)(20) in the Second Draft Proposed Regulations to define the term “organic waste” by referencing PRC Section 42649.8, subsection (d). This subsection is necessary to further clarify subsections 17989(a)(28) and 17989.5(a)(1)(A), which reference “organic waste recycling programs.”

**Subsection 17989(a)(18) – Renumbered to (a)(21) in the Second Draft Proposed Regulations; no substantive changes**

Subsection (a)(~~18~~)(21) defines the term “person.” This subsection clarifies that a person has the same meaning as defined in PRC Section 40170 and is necessary to describe the individual or entities that may act on behalf of a food service packaging manufacturer for purposes of the Act.

**Subsection 17989(a)(19) – Renumbered to (a)(22) in the Second Draft Proposed Regulations; no substantive changes**

Subsection (a)(~~19~~)(22) defines the term “per- and polyfluoroalkyl substance” (PFAS).” This definition provides clarity to the regulated community and is necessary because it defines the chemicals that must not be contained in a food service packaging item at a

level above 100 parts per million, pursuant to the public health and litter impacts criteria in Section 17989.2(a)(3).

**Subsection 17989(a)(20) – Renumbered to (a)(23) in the Second Draft Proposed Regulations and updated in the Third Draft Proposed Regulations**

Subsection (a)(20)(23) defines “plastic bag,” a term that is used in the statutory definition of “food service packaging” as codified in PRC Section 42370.1(c). This definition provides a description of a plastic bag’s style and design and is necessary to clarify what type of plastic bag meets the definition of “plastic bag” and is not subject to the requirements of the Act and regulations.

CalRecycle revised this subsection in the Third Draft Proposed Regulations to remove ambiguity about the design of a “plastic bag” by specifying that, in addition to having an open top and handles, it “is designed not to be closeable or sealable.”

**Subsection 17989(a)(24) – New definition added in the Third Draft Proposed Regulations**

CalRecycle added subsection (a)(24) in the Third Draft Proposed Regulations to include the statutory definition of “prepared food.” The new definition is necessary to be consistent with statute and clarify the meanings of “mass produced” and “cooking or food preparation techniques.”

**Subsection 17989(a)(21) – Renumbered to (a)(24) in the Second Draft Proposed Regulations; renumbered to (a)(25) in the Third Draft Proposed Regulations; no substantive changes**

Subsection (a)(21)(25) defines the term “Proposition 65 list.” This definition describes the name of the list that indicates the chemicals that must be disclosed by a food service packaging manufacturer if the use of its food service packaging item results in exposure to those specified chemicals. This subsection is necessary to identify the source that must be used by a food service packaging manufacturer in order to complete the application requirement in Section 17989.6(a)(6). The subsection is also necessary to clarify the origin of the specific names of chemicals that will be included in the List that is published and maintained by the department.

**Subsection 17989(a)(22) – Renumbered to (a)(25) in the Second Draft Proposed Regulations; renumbered to (a)(26) in the Third Draft Proposed Regulations; no substantive changes**

Subsection (a)(22)(26) defines the term “recycling” by referencing the existing definition in PRC Section 40180. This subsection provides clarity regarding how the department shall evaluate whether a food service packaging item is considered recyclable pursuant to Section 17989.4. This subsection is necessary to maintain consistency in the

department's regulations and to clarify the comprehensive actions and processes that constitute "recycling."

**Subsection 17989(a)(23) – Renumbered to (a)(26) in the Second Draft Proposed Regulations; renumbered to (a)(27) in the Third Draft Proposed Regulations; no substantive changes**

Subsection (a)(23)(27) defines the term "recycling facility" by referencing the definition of "recycling center" in CCR, Title 14, subsection 17402.5(d). This subsection is necessary to maintain consistency in the department's regulations and to clarify the types of facilities that must receive and process food service packaging items from takeback programs as one pathway to meet the recyclable criteria.

**Subsection 17989(a)(24) – Renumbered to (a)(27) in the Second Draft Proposed Regulations; updated and renumbered to (a)(28) in the Third Draft Proposed Regulations**

Subsection (a)(24)(28) defines the term "recycling program" by referencing the existing definition of "diversion program" in PRC Section 40127 and clarifies that only programs that regularly collect recyclables and organics within a jurisdiction by an authorized hauler will be considered eligible for meeting the recyclable and compostable criteria. Materials collected by an individual for personal use do not meet the definition. This subsection is necessary to establish a transparent, consistent definition for what constitutes a recycling program and may be counted toward the required percentage of recycling programs that collect a food service packaging material for recycling or composting.

CalRecycle revised this subsection in the Third Draft Proposed Regulations to clarify that a recycling program must include services provided by a hauler that is authorized by a state or local government entity pursuant to a contract, agreement, permit, or other authorization.

**Subsection 17989(a)(25) – Updated and renumbered to (a)(28) in the Second Draft Proposed Regulations; removed from the Third Draft Proposed Regulations**

~~Subsection (a)(25) defines the term "safe and timely manner." This subsection is necessary to clarify the requirements of the compostable food service packaging criteria, pursuant to Section 17989.5(a)(3). This subsection specifies the certification requirements and timeframe that determine if a food service packaging item meets one of the compostable food service packaging criteria. Specifically, this definition clarifies that the food service packaging item must be third-party certified to demonstrate 90 percent conversion of organic carbon to carbon dioxide in no more than 60 days in the active compost process and must also show that the degraded item has no adverse impacts on the ability of the compost to support plant growth. This subsection is~~

~~necessary to establish criteria requirements that ensure approved food service packaging items have been appropriately tested and certified to align with the timeframes of a typical California commercial compost facility to process compostable food service packaging during the course of its routine operations.~~

CalRecycle revised this subsection in the Second Draft Proposed Regulations by deleting the requirement for a food service packaging item to achieve 90 percent biodegradation within 60 days in the “active compost process.” The regulations were further revised to require that a third-party certification entity confirm the item performs in a “safe and timely manner” by verifying it meets the biodegradation and disintegration requirements of the applicable ASTM standards within 60 days. Specifically, a compostable plastic food service item must achieve 90 percent biodegradation according to section 6.2 in ASTM Standard Specification D6400-19 or D6868-19, as applicable, and 90 percent disintegration within 60 days according to section 6.3 in ASTM Standard Specification D6400-19 or D6868-19, as applicable. These changes were made in response to stakeholder feedback asserting that disintegration is the more relevant criteria for determining compostability of food service packaging items, as opposed to just biodegradation. Stakeholders also recommended removing reference to the “active compost process” and instead directly referencing ASTM standards.

CalRecycle further revised this subsection in the Third Draft Proposed Regulations by deleting the requirement for a plastic food service packaging item to achieve 90 percent disintegration within 60 days because the department determined that biodegradation is the more critical factor for ensuring that food service packaging items will break down and become part of useable compost, which is one of the key considerations identified by statute. The department determined that disintegration would not address microplastics, which, if released into the environment, could adversely impact wildlife and public health.

Further, stakeholders expressed confusion regarding the definition of “third-party certification entity” used in the First and Second Draft Proposed Regulations. CalRecycle therefore replaced this term in the Third Draft Proposed Regulations with “ISO/IEC 17025:2017 accredited laboratory” to clarify the type of entity that must conduct testing of food service packaging items, as specified in the regulations. This change addressed stakeholder concerns that the regulations were using the term “third-party certification entity” in a manner that was inconsistent with ASTM standards.

In the Third Draft Proposed Regulations, CalRecycle deleted this subsection from the definitions and incorporated the biodegradation requirement into the criteria for compostability in subsection 17989.5(a)(2). The term “safe and timely manner” is only used in subsection 17989.5(a)(2); thus, moving it to the compostable criteria provided

stakeholders with a more clear and efficient reference to the meaning and applicability of that term.

**Subsection 17989(a)(26) – Renumbered to (a)(29) in the Second Draft Proposed Regulations; removed from the Third Draft Proposed Regulations**

~~Subsection (a)(26) defines the term “sort.” This subsection is necessary to clarify the activities that constitute sorting of food service packaging materials so the department can evaluate whether a material has sufficient value as a secondary commodity to be recycled. This definition is consistent with the Act’s statutory requirements in PRC 42370.2(d)(3) that requires the department to consider whether a type of food service packaging is regularly sorted and aggregated into defined streams for recycling processes.~~

CalRecycle deleted this subsection, which defined the term “sort,” in the Third Draft Proposed Regulations because the meaning of the term is clear in the context of recyclability, and therefore unnecessary to define.

**Subsection 17989(a)(27) – Renumbered to (a)(30) in the Second Draft Proposed Regulations; updated and renumbered to (a)(29) in the Third Draft Proposed Regulations**

~~Subsection (a)(27)(29) defines the term “takeback program.” This definition is necessary to clarify requirements of a takeback program, pursuant to subsection 17989.4(a)(3)(B) and 17989.5(a)(1)(B). This subsection clarifies requirements such as convenience for consumers and options for deposits and incentives, in order for the department to evaluate whether a food service packaging item included in a takeback program meets the recyclable criteria. The purpose is to establish a transparent, consistent definition for what constitutes a takeback program for purposes of determining recyclability. This definition is needed for clarifying “takeback program” for the purposes of satisfying the recyclable and compostable criteria in subsections 17989.4(a)(3)(B) and 17989.5(a)(1)(B), respectively criterion that 75 percent of food service packaging items included in a takeback program are collected and recycled.~~

CalRecycle revised this subsection in the Third Draft Proposed Regulations to include food service packaging items that are recovered for composting in the definition of “takeback program.” CalRecycle also added language to clarify that takeback programs can, “without limitation,” utilize deposits or other incentives to encourage customers to return the food service packaging items and revised the subsection to clarify what is meant by collection of food service packaging items by statewide recycling programs using haulers versus what is meant by collection (recovery) of food service packaging items for recycling or composting by takeback programs operated at food service facilities.

**Subsection 17989(28) – Updated and renumbered to (a)(31) in the Second Draft Proposed Regulations; removed from the Third Draft Proposed Regulations**

~~Subsection (a)(28) defines the term “third-party certification entity.” This subsection specifies the type of entity that must test and certify a food service packaging item to demonstrate it meets the applicable criteria in the regulation. This subsection is necessary to clarify what type of accreditation an independent laboratory needs in order to perform the required testing methods for certifying that a food service packaging item complies with the reusable, recyclable, or compostable criteria.~~

CalRecycle revised this subsection, which defined the term “third-party certification entity,” in the Second Draft Proposed Regulations to expand the definition to include entities that contract with ISO/IEC 17025 accredited laboratories. This revision was based on stakeholder feedback expressing concern over the use of the term “third-party certification entity.”

CalRecycle deleted the term “third-party certification entity” in the Third Draft Proposed Regulations and replaced it with “ISO/IEC 17025:2017 accredited laboratory.” This revision was made in response to stakeholder concern that the term was causing confusion. The addition of the term “ISO/IEC 17025:2017 accredited laboratory” was necessary to clarify the type of entity that must conduct the testing required in these regulations (i.e., subsections 17989.2(a)(3), 17989.3(a)(1), and 17989.5(a)(2)).

**Subsection 17989(a)(29) – Definition removed from the Second Draft Proposed Regulations**

~~Subsection (a)(29) defines the term “transfer/processor” by referencing the existing definition in CCR, Title 14. This definition is necessary to maintain consistency in the department’s regulations and to clarify “transfer/processor” as that term is used in the regulations for the purposes of determining that the recyclable criterion that 75 percent of transfer/processors sort and aggregate a food service packaging material into a single-named material bale, pursuant to Section 17989.4(a)(3)(A), has been met.~~

CalRecycle removed this subsection, which defined “transfer/processor,” in the Second Draft Proposed Regulations because the term is used only in the limited context of “large volume transfer/processing facility.” Because the regulation defines “large volume transfer/processing facility,” a separate definition for “transfer/processor” is unnecessary.

**Subsection 17989(b) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection 17989(b) in the Third Draft Proposed Regulations to establish which publications are incorporated by reference in their entirety when used in this Article. This subsection is necessary to comply with California Code of Regulations, Title 1, Division 1, Chapter 1, Article 2, Section 20.



**Subsection 17989(b)(1) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (b)(1) in the Third Draft Proposed Regulations to establish that ASTM D5338-15, “Standard Test Method for Determining Aerobic Biodegradation of Plastic Materials Under Controlled Composting Conditions, Incorporating Thermophilic Temperatures,” is incorporated by reference.

**Subsection 17989(b)(2) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (b)(2) in the Third Draft Proposed Regulations to establish that ASTM D6400-19, “Standard Specification for Labeling of Plastics Designed to be Aerobically Composted in Municipal or Industrial Facilities,” is incorporated by reference.

**Subsection 17989(b)(3) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (b)(3) in the Third Draft Proposed Regulations to establish that ASTM D6868-19, “Standard Specification for Labeling of End Items that Incorporate Plastics and Polymers as Coatings or Additives with Paper and Other Substrates Designed to be Aerobically Composted in Municipal or Industrial Facilities,” is incorporated by reference.

**Subsection 17989(b)(4) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (b)(4) in the Third Draft Proposed Regulations to establish that ISO 14855-1:2018, “Determination of the ultimate aerobic biodegradability of plastic materials under controlled composting conditions – Method by analysis of evolved carbon dioxide – Part 1: General method,” is incorporated by reference.

**Subsection 17989(b)(5) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (b)(5) in the Third Draft Proposed Regulations to establish that ISO 14855-2:2018, “Determination of the ultimate aerobic biodegradability of plastic materials under controlled composting conditions – Method by analysis of evolved carbon dioxide – Part 2: Gravimetric measurement of carbon dioxide evolved in a laboratory-scale test,” is incorporated by reference.

**Subsection 17989(b)(6) – New subsection added in Third Draft Proposed Regulations**

CalRecycle added this subsection in the Third Draft Proposed Regulations to establish that ISO/IEC 17025:2017, “General Requirements for the Competence of Testing and

Calibration Laboratories,” is incorporated by reference. This subsection is necessary, as the proposed regulation requires results from an ISO/IEC 17025:2017 accredited laboratory.

### **§17989.1. List of Approved Food Service Packaging.**

#### **Subsection 17989.1(a) – No substantive changes**

Subsection (a) establishes the minimum information that will be included on the List of Approved Food Service Packaging (List), as stated in the following six subsections, for each approved food service packaging item. This subsection is necessary in order to demonstrate what is required to show compliance with the requirements of the Act and regulations and to provide transparency to stakeholders and the general public about the attributes of the approved food service packaging items. It is also necessary to facilitate purchasing of approved food service packaging items by food service facilities and for updating state contract manuals and other materials published by the Department of General Services, as required by the Act.

#### **Subsection 17989.1(a)(1) – No substantive changes**

Subsection (a)(1) establishes that the List will specify whether a food service packaging item meets the requirements to be reusable, recyclable, or compostable. This subsection is necessary in order for food service facilities to identify and select the preferred type of food service packaging to purchase and to ensure the food service packaging items are appropriately managed (recycled or composted) at end-of-life.

#### **Subsection 17989.1(a)(2) – Updated in the Second Draft Proposed Regulations**

Subsection (a)(2) establishes that the List will include a description of the food service packaging type. This subsection is necessary in order for food service facilities to have the necessary information to purchase the appropriate types of food service packaging items that meet their needs.

CalRecycle revised this subsection in the Second Draft Proposed Regulations to clarify that the description of the food service packaging item on the List shall include the food service packaging type, the item name, and the size. This change was made to provide additional information to food service facilities using the List to purchase approved food service packaging items for their businesses, and to align with the required information that a food service packaging manufacturer must include as part of the application, as outlined in subsection 17989.6(a)(3).

#### **Subsection 17989.1(a)(3) – No substantive changes**

Subsection (a)(3) establishes that the List will include the names of the material(s) used to manufacture a food service packaging item. This subsection is necessary in order for

food service facilities to have the necessary information about the specific composition of a food service packaging item to determine if it meets their needs.

**Subsection 17989.1(a)(4) – Subsection removed from the Second Draft Proposed Regulations**

~~Subsection (a)(4) establishes that the List will include the size of the food service packaging item. This subsection is necessary in order for food service facilities to have the necessary information to purchase the appropriate sizes of food service packaging items that meet their needs.~~

CalRecycle removed this subsection in the Second Draft Proposed Regulations because the dimensions of the food service packaging item were incorporated into subsection (a)(2) as part of the item’s description, rendering this subsection redundant.

**Subsection 17989.1(a)(5) – Renumbered from the Second Draft Proposed Regulations to (a)(4); no substantive changes**

Subsection (a)(~~5~~)(4) establishes that the List will include the name of the food service packaging manufacturer. This subsection is necessary in order for food service facilities to have the necessary information regarding what company made the food service packaging item for transparency and to determine where to get more information and purchase the food service packaging items that meet their needs.

**Subsection 17989.1(a)(6) – No substantive changes**

Subsection (a)(~~6~~)(5) establishes that the List will include the names of chemicals on the Proposition 65 list that are contained in the food service packaging product. This subsection is necessary to provide transparency about the chemicals used to manufacture a food service packaging item and to allow the public to be informed of potential public health risks associated with exposure to these chemicals.

**Subsection 17989.1(b) – New subsection added in the Second Draft Proposed Regulations**

CalRecycle added subsection (b) in the Second Draft Proposed Regulations to establish that the List of Approved Food Service Packaging will include a section that identifies materials that the department determines meet the requirements in subsections 17989.4(a)(3)(A) and 17989.5(a)(1)(A). The department will determine whether specific materials meet either of those criteria by evaluating market trends and data obtained from industry sources and the department’s databases and reporting systems. This subsection further establishes how this section of the list will be used in implementation. This subsection is necessary to establish the department’s role in developing and providing a materials list to applicants.

**Subsection 17989.1(b) – Renumbered to (c) in the Second Draft Proposed Regulations; no substantive changes**

Subsection ~~(b)~~(c) establishes the process by which the initial List shall be developed, as stated in the following two subsections. This subsection is necessary to be consistent with requirements in statute for developing the List that must be produced for use by food service facilities and the Department of General Services.

**Subsection 17989.1(b)(1) – Renumbered to (c)(1) in the Second Draft Proposed Regulations; updated in the Third Draft Proposed Regulations**

Subsection ~~(b)~~(c)(1) establishes that food service packaging manufacturers, or those acting on their behalf, have up to 30 days after the regulations become effective to submit an application to the department for evaluation in order to be considered for the initial List. This subsection is necessary to provide clarity to food service packaging manufacturers regarding application submittal timelines. Statute requires the department to publish the List within 90 days after the regulations are approved. Therefore, food service packaging manufacturers must submit an application within 30 days in order to provide the department sufficient time to perform a completeness review and evaluation, make a determination, and publish a List of approved types of food service packaging within 90 days as required by the Act.

CalRecycle revised this subsection in the Third Draft Proposed Regulations to clarify that the 30-day period for initial applications would begin when the department posts the approved regulation on its website. This change was made to ensure manufacturers could more easily determine when the 30-day timeframe begins, so they can submit applications for review in a timely manner.

**Subsection 17989.1(b)(2) – Renumbered to (c)(2) in the Second Draft Proposed Regulations; updated in the Third Draft Proposed Regulations**

Subsection ~~(b)~~(c)(2) establishes that the department will review applications in the order they are received. This subsection is necessary to provide transparency about the application review process and to establish a neutral and unbiased method for evaluating applications. This subsection is also necessary to clarify that only applications for food service packaging items that meet the applicable criteria will be added to the List and that submitting an application does not guarantee that the food service packaging item will be added to the List.

CalRecycle revised this subsection in the Third Draft Proposed Regulations to clarify that applications for groups of food service packaging items may also be evaluated for inclusion on the initial List. This change was made to ensure manufacturers know that they may submit applications for either a single food service packaging item or a group of items for the initial List.

**Subsection 17989.1(c) – Renumbered to (d) in the Second Draft Proposed Regulations; no substantive changes**

Subsection ~~(e)~~(d) establishes a process for the department to evaluate and update the List with additional food service packaging items after the initial List is published. This subsection is necessary to clarify that the department will continuously evaluate applications in the order they are received and that the food service packaging items that meet the applicable criteria will be added to the List on an ongoing basis. This continuous evaluation process is intended to recognize that packaging technologies and innovations are constantly evolving, and to allow opportunities for manufacturers to submit applications for new types of food service packaging to be added to the List.

**Subsection 17989.1(d) – Subsection removed from the Second Draft Proposed Regulations**

~~Subsection (d) states that the department must notify the Department of General Services and the public no more than 30 days after the List is updated. This subsection is necessary to ensure that the Department of General Services and the public receives timely notification of changes made to the List. Notification will assist the Department of General Services in complying with its responsibility to revise relevant state contracting and procurement rules and procedures pursuant to PRC Section 42370.6~~

CalRecycle removed this subsection in the Second Draft Proposed Regulations because the requirement that the department notify the Department of General Services was moved to subsection 17989.1(h); the subsections were reordered to follow a more logical sequence.

**Subsection 17989.1(e) – Subsection removed from the Second Draft Proposed Regulations**

~~Subsection (e) establishes the process for application resubmittal after a non-aesthetic change is made to a food service packaging item. This subsection is necessary to clarify that non-aesthetic changes made to a food service packaging item require a manufacturer to submit a new application within 30 days. The timeframe of 30 days ensures that a new application is submitted promptly after the changes are made and that the department must review a food service packaging item to evaluate if the changes affecting its material composition or construction impact compliance with the applicable criteria. If so, the department will notify the manufacturer and the food service packaging item will be removed from the List.~~

CalRecycle moved this subsection in the Second Draft Proposed Regulations to subsection 17989.6(g) to be consistent with the other applications requirements; the subsections were reordered to follow a more logical sequence.

**Subsection 17989.1(f) – Updated and renumbered to (e) in the Second Draft Proposed Regulations; updated in the Third Draft Proposed Regulations**

Subsection (f)(e) clarifies that the department will remove a food service packaging item from the List if it does not meet the requirements of the Act. This subsection is necessary to establish that the department will notify a manufacturer if an approved food service packaging item no longer meets the applicable criteria and will remove the item from the List.

CalRecycle renumbered this subsection in the Second Draft Proposed Regulations to subsection (e) and added subsections to establish the actions the department must take before removing a food service packaging item or material from the List based on its determination that an approved food service packaging item or material no longer meets the applicable criteria.

CalRecycle further revised this subsection in the Third Draft Proposed Regulations to clarify that the department will make a preliminary determination concerning a food service packaging item or material, and that such a determination will initiate the process for removal of a food service packaging item from the List. This change was made to give affected parties greater clarity concerning the removal process.

**Subsection 17989.1(e)(1) – New subsection added in the Second Draft Proposed Regulations; updated in the Third Draft Proposed Regulations**

CalRecycle added subsection (e)(1) in the Second Draft Proposed Regulations to establish that the department will notify the food service packaging manufacturer if it determines that an approved food service packaging item no longer meets the applicable requirements along with the reasons for the determination. This subsection further specifies that the manufacturer will have no fewer than 30 days to submit written comments. This addition is necessary to establish that the department will provide notice to the food service packaging manufacturer of its findings and provide adequate time for the manufacturer to submit comments in reply.

CalRecycle revised the language in this subsection in the Third Draft Proposed Regulations to clarify that the department will provide notice regarding the potential removal of a food service packaging item from the List and that the manufacturer may also provide additional information relevant to the preliminary determination during the 30 day timeframe. These changes were made to clarify when the department will provide notice to the food service packaging manufacturer and to allow the manufacturer to submit information in reply.

**Subsection 17989.1(e)(2) – New Subsection added in the Second Draft Proposed Regulations; updated in the Third Draft Proposed Regulations**

CalRecycle added subsection (e)(2) in the Second Draft Proposed Regulations to establish that the department will notify the public if it determines that a food service packaging material no longer meets the applicable requirements along with the reasons for the determination. This subsection further specifies that the public will have no fewer than 30 days to submit written comments. This addition is necessary to establish that the department will provide notice to the public of its findings and provide adequate time for the public to submit comments in reply.

CalRecycle revised this subsection in the Third Draft Proposed Regulations to clarify that the department will provide notice regarding the potential removal of a material from the List and that the public may also provide additional information relevant to the preliminary determination during the 30 day timeframe. These changes were made to clarify when the department will provide notice to the public and to allow the public to submit information in reply.

**Subsection 17989.1(e)(3) – New subsection added in the Second Draft Proposed Regulations; updated in the Third Draft Proposed Regulations**

CalRecycle added subsection (e)(3) in the Second Draft Proposed Regulations to establish that the department will evaluate written comments received from the food service packaging manufacturer and the public prior to making a final determination. This addition is necessary to establish that the department will take the received feedback into consideration.

CalRecycle revised this subsection in the Third Draft Proposed Regulations to clarify that the department will also evaluate the additional information received from the food service packaging manufacturer and the public. This change clarifies that the department will take all feedback into consideration before issuing its final determination if an approved food service packaging item or material meets the applicable requirements.

**Subsection 17989.1(e)(4) – New subsection added in the Second Draft Proposed Regulations; updated in the Third Draft Proposed Regulations**

CalRecycle added subsection (e)(4) in the Second Draft Proposed Regulations to specify the actions the department will take after making its final determination. This addition is necessary to establish that the department will either remove the food service packaging item or material from the List of Approved Food Service Packaging or will make no changes.

CalRecycle revised this subsection in the Third Draft Proposed Regulations to clarify that the department may “maintain” the food service packaging item or material on the List. This change clarifies that the department will keep items and materials on the List if it is determined that they meet the applicable requirements.

**Subsection 17989.1(f) – New subsection added in the Second Draft Proposed Regulations; updated in the Third Draft Proposed Regulations**

CalRecycle added subsection (f) in the Second Draft Proposed Regulations to establish the process the department will follow when a food service packaging item that is on the List may contain a chemical that has the potential to impact public health or wildlife. These chemicals include those that become listed via changes to the Toxics in Packaging Prevention Act or the Proposition 65 list, or actions taken pursuant to subsection 17989.2(a)(4) of this draft. This addition is necessary to clarify the actions the department shall take if an identified chemical may be used in food service packaging.

CalRecycle revised this subsection in the Third Draft Proposed Regulations to specify that the department will notify a manufacturer when an approved food service packaging item may contain a chemical that has been added as a regulated metal under the Toxics in Packaging Prevention Act, or is included on the Proposition 65 list. This change clarifies when the department will provide notice to a manufacturer and is necessary to align this subsection with the process established in subsection 17989.2(b) in the Third Draft Proposed Regulations.

**Subsection 17989.1(f)(1) – New subsection added in the Second Draft Proposed Regulations; updated in the Third Draft Proposed Regulations**

CalRecycle added subsection (f)(1) in the Second Draft Proposed Regulations to establish that the food service packaging manufacturer must provide information to the department indicating if the identified chemical is present in their food service packaging items, within 60 days of being notified. This addition is necessary to provide adequate time for the manufacturer to collect and submit information demonstrating the presence or absence of the chemical in their food service packaging items.

CalRecycle revised this subsection in the Third Draft Proposed Regulations to further clarify that the food service packaging manufacturer has 60 days from the date of notification to submit the required information.

**Subsection 17989.1(f)(2) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (f)(2) in the Third Draft Proposed Regulations to establish that the department will remove a food service packaging item from the List if it



determines the food service packaging item no longer meets the applicable criteria in Section 17989.2, or if information is not received from the food service packaging manufacturer within the 60-day timeframe. This addition is necessary to establish that the department will remove food service packaging items that are determined to no longer meet the applicable public health and litter impact criteria and will take this action if the required information is not received from the manufacturer.

**Subsection 17989.1(f)(3) - New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (f)(3) in the Third Draft Proposed Regulations to establish that the removal of food service packaging items due to the required information not being received within the 60-day timeframe is not subject to the removal process outlined in subsection (e). This addition is necessary to establish that the department will not initiate a public comment period or evaluate public comments if the required information is not received.

**Subsection 17989.1(g) – Updated in the Second and Third Draft Proposed Regulations**

~~Subsection (g) establishes that a food service packaging manufacturer must submit a new application to the department within 180 days of being notified that the List is being evaluated. This subsection is necessary to align with PRC subsection 42370.3(b) which requires the department to regularly, but no less than once every five years, evaluate the List to determine if a food service packaging item is reusable, recyclable, or compostable. The subsection further establishes that the department may remove or add a type of food service packaging item following its evaluation. The timeframe of 180 days is intended to provide a food service packaging manufacturer with adequate time to prepare and submit an application for an item or groups of items to the department for evaluation. This subsection also states that the department may remove a food service packaging item if a new application is not received. This is necessary to ensure all items on the List are in compliance with the Act.~~

CalRecycle revised this subsection in the Second Draft Proposed Regulations to establish that the department will evaluate the List of Approved Food Service Packaging Items no less than once every five years (as mandated by statute). Language previously in this subsection was moved to a new subsection, (g)(1); the subsections were reordered to follow a more logical sequence.

CalRecycle further revised this subsection in the Third Draft Proposed Regulations to correctly identify PRC subsection 42370.3(b) and to clarify that the department will review and evaluate the entire List to determine if each food service packaging item is reusable, recyclable, or compostable. These changes were made to ensure the correct

statutory language is reflected and to clarify what information on the List the department will review.

**Subsection 17989.1(g)(1) – New subsection added in the Second Draft Proposed Regulations; updated in the Third Draft Proposed Regulations**

CalRecycle added subsection (g)(1) in the Second Draft Proposed Regulations to establish the process the department will follow when reevaluating food service packaging items, starting with notifying the food service packaging manufacturers.

CalRecycle further revised this subsection in the Third Draft Proposed Regulations to clarify that a new application is required only if the department determines that a new application is reasonably necessary for the department to evaluate whether an approved food service packaging item is reusable, recyclable, or compostable. CalRecycle also revised the language to clarify if a new application is not submitted by the manufacturer within the 180-day timeframe, the department will remove the food service packaging item from the List without following the removal process of subsection (e). These changes were made to clarify when the department will notify a manufacturer for a new application and to establish that the department will not initiate a public comment period or evaluate public comments if a new application is not received.

**Subsection 17989.1(g)(2) – New subsection added in the Second Draft Proposed Regulations; updated in the Third Draft Proposed Regulations**

CalRecycle added this subsection in the Second Draft Proposed Regulations to establish that a food service packaging manufacturer must submit a new application to the department within 180 days of being notified that the List is being evaluated. This subsection is necessary to align with PRC subsection 42370.3(b), which requires the department to regularly, but no less than once every five years, evaluate the List to determine if a food service packaging item is reusable, recyclable, or compostable. The timeframe of 180 days is intended to provide a food service packaging manufacturer with adequate time to prepare and submit an application for a food service packaging item or group of items to the department for evaluation. This subsection also states that the department may remove a food service packaging item if a new application is not received. This is necessary to ensure the department has the required information it needs to perform an evaluation of the food service packaging item within the timeframe established by statute.

CalRecycle further revised this subsection in the Third Draft Proposed Regulations to clarify that the department will review new applications for food service packaging items that are already on the List, and either maintain the food service packaging item on the List or issue a preliminary determination that the food service packaging item no longer meets the applicable criteria, following the removal process outlined in subsection (e).

This addition is necessary to establish the department's process for reevaluating and updating the List.

**Subsection 17989.1(h) – New subsection added in the Second Draft Proposed Regulations**

This subsection was previously included as subsection (d); the subsections were reordered to follow a more logical sequence. This subsection establishes that the department must notify the Department of General Services and the public within 30 days after the List of Approved Food Service Packaging is updated. This addition is necessary to ensure that the Department of General Services and the public receives timely notification of changes made to the List, which will assist the Department of General Services in complying with its responsibility to revise relevant state contracting and procurement rules and procedures, pursuant to PRC Section 42370.6.

**§17989.2. Public Health and Litter Impacts Criteria.**

**Subsection 17989.2(a) – No substantive changes**

Subsection (a) establishes the criteria to minimize impacts on public health, wildlife, and litter as stated in the following five subsections. This subsection is necessary to be consistent with the requirement under PRC 42370.2(g) that the department consider potential impacts on litter, public health, and wildlife litter and potential public health or wildlife impacts.

**Subsection 17989.2(a)(1) – Updated in the Third Draft Proposed Regulations**

Subsection (a)(1) establishes that food service packaging items that are also subject to the Toxics in Packaging Prevent Act (Health and Safety Code 25214.11 et seq.) must not contain lead, mercury, cadmium, or hexavalent chromium or must not exceed 100 parts per million by weight of the sum of these metals (Health and Safety Code 25214.13(c)) because these substances are harmful to public health. This subsection is necessary to protect public health by limiting the amount of heavy metals in food service packaging. In developing this subsection of the regulations, the department consulted with the Department of Toxic Substances Control on the scope of the Toxics in Packaging Prevent Act.

CalRecycle revised this subsection in the Third Draft Proposed Regulations to clarify that a food service packaging item shall not contain any other "regulated metals" subject to the Toxics in Packaging Prevention Act, in addition to the current heavy metals: lead, mercury, cadmium, or hexavalent chromium. CalRecycle also revised this subsection to clarify that the sum of the concentration levels of all the regulated metals must not exceed 100 parts per million by weight. These revisions are necessary to be consistent with the Toxics in Packaging Prevention Act.

**Subsection 17989.2(a)(2) – Updated in the Third Draft Proposed Regulations**

Subsection (a)(2) establishes that a food service packaging manufacturer or person acting on its behalf must disclose to the department any chemicals that are on the Proposition 65 list (Health and Safety Code 25249 et seq.). Chemicals on the Proposition 65 list may be intentionally added or be a known contaminant in the manufacturing process used to make food service packaging items. This subsection is necessary to inform the public of potential health risks associated with chemicals that are known to the State of California to cause cancer, birth defects, or other reproductive harm. By informing the public of these health risks the public will be better informed when making purchasing decisions for food service packaging items. In developing this subsection of the regulations, the department consulted with the Office of Environmental Health Hazard Assessment regarding the Proposition 65 list and other chemicals used in the manufacture of food service packaging.

CalRecycle revised the language in this subsection in the Third Draft Proposed Regulations to require that food service packaging manufacturers disclose the names of all chemicals contained in a food service packaging item that are included on the Proposition 65 list. This change was necessary to ensure that the subsection clearly identified the type of entity subject to the requirement.

**Subsection 17989.2(a)(3) – Updated in the Third Draft Proposed Regulations**

This subsection specifies the requirement for plastic or fiber-based food packaging that is recyclable or compostable to have less than 100 parts per million (ppm) PFASs, as measured by total fluorine. This section is necessary to protect public health and wildlife, as required by the Act. Per- and polyfluoroalkyl substances, or PFASs, are a class of thousands of chemicals of growing concern due to their impacts on public health and the environment. PFASs or their degradation products, such as perfluoroalkyl acids (PFAAs), persist in the environment after use, and are associated with harm to humans and to wildlife, such as reproductive and developmental toxicity, carcinogenicity, and liver toxicity.<sup>4,5</sup> Fiber-based food packaging, which can be made from paper, paper board, and molded fiber, can contain PFASs to render the packaging

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<sup>4</sup> Department of Toxic Substances Control. Chemical Profile for Perfluoroalkyl and Polyfluoroalkyl Substances (PFASs) In Carpets and Rugs. See in Section 2.3. 2018. <https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/10/Product-Chemical-Profile-PFAS-Carpets-and-Rugs.pdf>

<sup>5</sup> Department of Toxic Substances Control. Rulemaking package for Perfluoroalkyl and Polyfluoroalkyl Substances (PFASs) In Carpets and Rugs. 2020. Accessed February 28, 2020: <https://dtsc.ca.gov/regs/proposed-regulation-pfass-in-carpets-and-rugs/>

resistant to oil, grease, and water.<sup>6,7,8,9</sup> While most research on food packaging has focused on fiber-based products, the department is also concerned about the potential uses of PFASs in plastic food packaging manufacturing,<sup>10,11</sup> and because of preliminary testing on one plastic food service packaging item that had 1,300 ppm total fluorine.<sup>12</sup>

Food packaging treated with PFASs can expose humans to health risks during the use of the products because PFASs can migrate into the food.<sup>13</sup> These products can also expose humans and wildlife to PFASs through multiple pathways related to the product's end-of-life management practices. For example, the food service packaging items subject to this requirement are intended to be composted or recycled. Higher levels of PFASs in compost has been associated with food packaging.<sup>14</sup> PFASs can be taken up by plants, where they bioaccumulate in the edible portions of plants that are consumed by humans and wildlife when contaminated soil conditioners or treatments (e.g., compost, biosolids) are land applied.<sup>15</sup> Recycling paper and plastic food service packaging may also result in environmental releases of PFASs due to management of the residuals and byproducts. Land-applied papermill sludge and ash have been associated with contaminating crops on a dairy farm that resulted in high concentrations of PFASs in the farm's milk.<sup>16</sup> The plastic recycling process requires the use of water, which may be discharged to wastewater treatment plants or filtered onsite (department staff observations), and PFASs are typically not removed during wastewater treatment

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<sup>6</sup> Center for Environmental Health. Avoiding hidden hazards: A purchaser's guide to safer foodware. 2018. <https://www.ceh.org/wp-content/uploads/CEH-REPORT-Disposable-Foodware-rev-6.2019.pdf>

<sup>7</sup> Safer Chemicals Healthy Families, Toxic-Free Future. Take Out Toxics: PFAS Chemicals in Food Packaging. 2018. <https://saferchemicals.org/2018/12/11/new-study-finds-nonstick-pfas-chemicals-in-takeout-packaging-at-top-grocery-stores/>

<sup>8</sup> Schaider et al. Fluorinated compounds in U.S. fast food packaging. 2017. <https://pubs.acs.org/doi/pdf/10.1021/acs.estlett.6b00435>

<sup>9</sup> Food and Drug Administration. Inventory of Effective Food Contact Substance (FCS) Notifications, see Food Contact Notifications #206, 255, 628, 827, 1097, 1676 for examples. 2020. <https://www.accessdata.fda.gov/scripts/fdcc/?set=FCN>

<sup>10</sup> Food and Drug Administration. Inventory of Effective Food Contact Substance (FCS) Notifications, see Food Contact Notifications #260, 1255, 1560, and 1601 for examples. 2020. <https://www.accessdata.fda.gov/scripts/fdcc/?set=FCN>

<sup>11</sup> Center for Environmental Health. Avoiding hidden hazards: A purchaser's guide to safer foodware. 2018. <https://www.ceh.org/wp-content/uploads/CEH-REPORT-Disposable-Foodware-rev-6.2019.pdf>

<sup>12</sup> Personal communication. Maureen Kinyua, University of California, Davis. 2019.

<sup>13</sup> Trier et al. PFAS in paper and board for food contact – options for risk management of poly- and perfluorinated substances. 2017.

[https://backend.orbit.dtu.dk/ws/portalfiles/portal/149769110/Rapport\\_PFAS\\_in\\_paper\\_and\\_board\\_for\\_food\\_contact\\_Options\\_for\\_risk\\_management\\_of\\_poly\\_and\\_perfluorina.pdf](https://backend.orbit.dtu.dk/ws/portalfiles/portal/149769110/Rapport_PFAS_in_paper_and_board_for_food_contact_Options_for_risk_management_of_poly_and_perfluorina.pdf)

<sup>14</sup> Choi et al. Perfluoroalkyl Acid Characterization in U.S. Municipal Organic Solid Waste Composts. 2019. DOI: 10.1021/acs.estlett.9b00280

<sup>15</sup> Department of Toxic Substances Control. Chemical Profile for Perfluoroalkyl and Polyfluoroalkyl Substances (PFAs) in Carpets and Rugs, see pages 42-43 and 51-52. 2018. <https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/10/Product-Chemical-Profile-PFAS-Carpets-and-Rugs.pdf>

<sup>16</sup> Natural Resources Defense Council. America's Dairyland May Have a PFAS Problem. 2019. <https://www.nrdc.org/stories/americas-dairyland-may-have-pfas-problem>

but certain PFASs partition to biosolids.<sup>17</sup> Residuals remaining after onsite filtration may be discarded in landfills, which can also result in environmental exposures via landfill leachate.<sup>15</sup>

The proposed regulations specify that recyclable or compostable food packaging made from plastic or fiber contain no more than 100 ppm total fluorine to limit exposure to PFASs. The 100 ppm total fluorine threshold in the proposed regulation is consistent with local ordinances that seek to limit PFASs in food packaging.<sup>18,19,20</sup> Some industry organizations, including the leading certifier of compostable products in North America<sup>21</sup> and an organization that conducts field tests of compostable products,<sup>22</sup> also require certified compostable products to contain no more than 100 ppm total fluorine to limit the potential for PFASs in the resulting compost.

The proposed 100 ppm total fluorine threshold is not based on a risk assessment. A human health risk assessment involves estimating exposure and thus would require more information on exposure from this product throughout its life cycle, including migration data for PFASs (including impurities and contaminants). Additionally, more toxicity data would be needed for many of the PFASs in order to adequately estimate risk from exposure. For example, a risk assessment would require the development of Reference Doses for specific PFASs with enough whole animal or human data, and Relative Potency Factors for other PFASs to quantify the health effects from exposure to complex mixtures of PFASs.<sup>23</sup> An ecological risk assessment would also require additional toxicity and exposure data to quantify the risk from these products to wildlife. Nonetheless, the threshold of 100 ppm total fluorine, at a minimum, will limit the amount of PFASs in food service packaging on the List because products that were identified as

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<sup>17</sup> Department of Toxic Substances Control. Chemical Profile for Perfluoroalkyl and Polyfluoroalkyl Substances (PFASs) in Carpets and Rugs, see page 20. 2018. <https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/10/Product-Chemical-Profile-PFAS-Carpets-and-Rugs.pdf>

<sup>18</sup> San Francisco, City and County of. Single-Use Food Ware Plastics, Toxics, and Litter Reduction. City of San Francisco Ordinance No. 294-18. 2018.

[https://sfenvironment.org/sites/default/files/fliers/files/sfe\\_zw\\_fsw\\_plastic\\_reduction\\_ordinance.pdf](https://sfenvironment.org/sites/default/files/fliers/files/sfe_zw_fsw_plastic_reduction_ordinance.pdf)  
<sup>19</sup> Berkeley, City of. Single Use Foodware and Litter Reduction. Ordinance No. 7, 639-N.S.2019. [https://www.cityofberkeley.info/uploadedFiles/Public\\_Works/Level\\_3\\_-\\_Solid\\_Waste/2019-02-19%20Item%2001%20Ordinance%207639.pdf](https://www.cityofberkeley.info/uploadedFiles/Public_Works/Level_3_-_Solid_Waste/2019-02-19%20Item%2001%20Ordinance%207639.pdf)

<sup>20</sup> San Francisco Department of the Environment. Plastic, Litter, and Toxics Reduction Law (Purchasing & Usage Guidelines). 2019. <https://sfenvironment.org/reduceplastic-purchasing-guidelines>

<sup>21</sup> Biodegradable Products Institute, Incorporated. Position on Fluorinated Chemicals. 2019. [https://Biodegradable\\_Products\\_Instituteworld.org/page-1857568](https://Biodegradable_Products_Instituteworld.org/page-1857568)

<sup>22</sup> Compost Manufacturing Alliance. Profile Submission Form – Compostable Products. 2019. [https://compostmanufacturingalliance.com/wp-content/uploads/CMA\\_Profile\\_fillable.pdf](https://compostmanufacturingalliance.com/wp-content/uploads/CMA_Profile_fillable.pdf)

<sup>23</sup> National Institute for Public Health and the Environment. Per- and polyfluoroalkyl substances (PFASs) in food contact material. 2019. <https://www.rivm.nl/bibliotheek/rapporten/2018-0181.pdf>

“likely containing fluorinated compounds” had an average of five<sup>24</sup> to ten times higher detections of total fluorine compared to those that had “low fluorine” designation.<sup>25</sup>

This proposed threshold is based on a total fluorine measurement, as opposed to PFAS-specific testing. Chemical-specific chromatographic-based methods (i.e., liquid chromatography, gas chromatography) have not been developed for PFASs. PFASs are a large class of structurally diverse chemicals posing a considerable challenge for chemical-specific analytical methods development.<sup>26</sup> Therefore, total fluorine measurements (i.e., combustion ion chromatography (CIC), particle-induced  $\gamma$ -ray emission spectroscopy (PIGE), and instrumental neutron activation analysis (INAA)) allow for a rapid screening technique to quantify the total fluorine content independent of molecular structure.<sup>24</sup> In determining the necessity of this subsection of the regulations and the basis for this requirement, the department consulted with the Office of Environmental Health Hazard Assessment, the State Water Resources Control Board, and the Department of Toxic Substances Control.

CalRecycle revised this subsection in the Third Draft Proposed Regulations to identify three examples of analytical techniques known to the department that could be used to appropriately quantify the total fluorine concentration in food service packaging, while also allowing for other analytical techniques to be used in the absence of an existing standard. This revision addresses a stakeholder comment seeking clarity on suitable techniques for measuring total fluorine concentration in food service packaging. Additionally, CalRecycle revised this subsection in the Third Draft Proposed Regulations to specify that this testing must be conducted by an ISO/IEC 17025:2017 accredited laboratory using the specified techniques. This modification is necessary to establish a consistent standard for the types of entities that can conduct testing to comply with these regulations.

#### **Subsection 17989.2(a)(4) – Updated in the Second and Third Draft Proposed Regulations**

~~Subsection (a)(4) establishes that food service packaging items may be removed from the List if another state or federal department identifies a public health concern with a food service packaging item. This subsection is necessary to allow the department to~~

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<sup>24</sup> Safer Chemicals Healthy Families, Toxic-Free Future. Take Out Toxics: PFAS Chemicals in Food Packaging, see page 9. 2018. <https://saferchemicals.org/2018/12/11/new-study-finds-nonstick-pfas-chemicals-in-takeout-packaging-at-top-grocery-stores/>

<sup>25</sup> Center for Environmental Health. Avoiding hidden hazards: A purchaser's guide to safer foodware, see page 10. 2018. <https://www.ceh.org/wp-content/uploads/CEH-REPORT-Disposable-Foodware-rev-6.2019.pdf>

<sup>26</sup> Schultes et al. Total Fluorine Measurements in Food Packaging: How Do Current Methods Perform?. 2019. <https://pubs.acs.org/doi/10.1021/acs.estlett.8b00700>

~~protect public health or the environment if another state or federal department identifies the potential for harm from a food service packaging item or a food service packaging material.~~

CalRecycle revised this subsection in the Second Draft Proposed Regulations and included “non-governmental organization” to clarify that the department would consider a wider variety of sources in identifying the potential for a food service packaging item to contribute to an adverse public health impact. CalRecycle also added language in the Second Draft Proposed Regulations to establish the process the department must follow if conducting such evaluations.

CalRecycle moved the requirements of this subsection to a newly-added subsection (b) in the Third Draft Proposed Regulations and made further revisions, including changing “non-governmental organization” to “other organization” to address stakeholder comments that “non-governmental organization” was unclear.

**Subsection 17989.2(a)(5) – Updated in the Second Draft Proposed Regulations; removed from the Third Draft Proposed Regulations**

~~Subsection (a)(5) establishes that the department may not include or may remove from the List a food service packaging item that is subject to local ordinances that ban or restrict the material type as a result of litter or marine debris concerns. This subsection is necessary because statute requires the department to consider potential impacts of littered food service packaging on the environment in the development of its criteria. This subsection is necessary to allow the department to protect the environment from litter impacts based on determinations that the food service packaging item contributes to litter or marine debris.~~

CalRecycle revised this subsection in the Second Draft Proposed Regulations to establish the process the department must follow prior to removing a food service packaging item from the List due to litter or ocean debris concerns.

CalRecycle moved the requirements of this subsection to a newly added subsection (b) in the Third Draft Proposed Regulations; the subsections were reordered to follow a more logical sequence.

**Subsection 17989.2(b) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (b) in the Third Draft Proposed Regulations to establish the actions, via subsections (1), (2), (3), and (4), that the department must follow if it determines that a food service packaging item may have the potential to contribute to litter or public health or wildlife impacts. This subsection also clarifies that the department shall follow the process established in subsection 17989.1(e) and will provide notice to the food service packaging manufacturer and the public to allow comments and information to be submitted for evaluation. This addition is necessary to



establish the role of the department when potential litter, public health, or wildlife impacts are identified and to establish the actions the department must take before removing a food service packaging item from the List.

This subsection is necessary to allow the department to protect public health or the environment, as specified in PRC 42730.2(g).

**Subsection 17989.2(b)(1) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (b)(1) in the Third Draft Proposed Regulations to establish the first action it will take to begin its review process. Specifically, the department will first consider if a food service packaging item has been identified by a state or federal government agency, or other organization, as having the potential to contribute to an adverse impact to litter, public health, or wildlife. This subsection is necessary to establish that CalRecycle will review determinations from other organizations that have identified potential adverse impacts from food service packaging.

**Subsection 17989.2(b)(2) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (b)(2) in the Third Draft Proposed Regulations to establish that the department will also evaluate publications, reports, and any other information provided by the entities identified in subsection (b)(1) to determine if these sources include data and findings that demonstrate a food service packaging item has the potential to contribute to litter or public health or wildlife impacts. This subsection is necessary to establish the department's obligations to evaluate relevant information prior to making such determinations.

**Subsection 17989.2(b)(3) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (b)(3) in the Third Draft Proposed Regulations to establish that the department must consult with the California Office of Environmental Health Hazard Assessment and the California Department of Toxic Substances Control if the basis of a determination relates to public health or wildlife impacts. This subsection is necessary to establish that the department will work with the state agencies that have applicable expertise to ensure the department's determinations are informed and based on scientifically valid information.

**Subsection 17989.2(b)(4) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (b)(4) in the Third Draft Proposed Regulations to establish that if a food service packaging item or material is subject to a ban, fee, or other restriction, the department must evaluate local ordinances and documentation in the public record. This subsection is necessary to clarify that the department will evaluate and consider city and county ordinances and supporting documentation that may provide evidence for the potential of a food service packaging item to contribute to litter or ocean debris.

**§17989.3. Reusable Food Service Packaging Criteria.**

**Subsection 17989.3(a) – No substantive changes**

Subsection (a) establishes that a reusable food service packaging item included on the List must meet the public health and litter impacts criteria in Section 17989.2 and one of the two criteria listed in the following subsections. This subsection is necessary to establish all the criteria that determine whether a food service packaging item is reusable and informs food service packaging manufacturers and food service facilities of the specific criteria the department will utilize to determine whether a food service packaging item is reusable.

**Subsection 17989.3(a)(1) – Updated in the Second and Third Draft Proposed Regulations**

Subsection (a)(1) establishes standards for cleaning, sanitizing, and durability that the department will use to determine if a food service packaging item is reusable. This subsection states that cleaning and sanitizing processes must conform with to the mechanical sanitization requirements set forth in pursuant to Health and Safety Code Sections 114101 and 114099.7 that define surface temperature, cleaning solution composition, and mechanical machine washing and aligns with the number of cycles required by Germany's standard DIN EN 12875-1<sup>27</sup> for testing the mechanical dishwashing resistance of utensils. This subsection is also necessary to clarify that an independent, accredited laboratory must certify the washing and durability requirements in order to provide reliable certification test results from a neutral and qualified third-party. In developing this subsection of the regulations, the department consulted with the Ocean Protection Council to determine a method for calculating an adequate number of wash cycles for reusable food service packaging items.

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<sup>27</sup> European Committee for Standardization. DIN EN 12875-1, Mechanical dishwashing resistance of utensils, Part 1: Reference test method for domestic articles. 2005. Available from ANSI. <https://webstore.ansi.org/Standards/DIN/DINEN128752005>

CalRecycle revised this subsection in the Second Draft Proposed Regulations to increase the minimum threshold for wash cycles from 125 to 780. This change was made in direct response to stakeholder comments expressing concern that 125 wash cycles was not stringent enough to ensure a food service packaging item is indeed “reusable” and would allow less durable plastic food service packaging items to qualify as “reusable.” Although multiple stakeholders requested a threshold of 1,000 wash cycles, the department determined 780 wash cycles was more appropriate based on consultations with food service facilities regarding the number of times reusable food service packaging items are reused in a single day (three) and based on the number of business days the items are used in one year (260). The timeframe of one year was selected to establish a durability requirement that is consistent with the alternative option of providing a one-year express, written warranty for a reusable item, pursuant to subsection 17989.3(a)(2).

CalRecycle further revised this subsection in the Third Draft Proposed Regulations to clarify that these tests must be conducted by an ISO/IEC 17025:2017 accredited laboratory. This revision is necessary because the definition of “third-party certification entity” was removed from Section 17989, and it clarifies that an independent, accredited laboratory must demonstrate that the food service packaging item meets the washing and durability requirements.

#### **Subsection 17989.3(a)(2) – Updated in the Third Draft Proposed Regulations**

Subsection (a)(2) establishes that a food service packaging item is considered reusable if the manufacturer provides a minimum one-year express, written warranty that the food service packaging item can be reused for one-year or the item will be replaced at the manufacturer’s expense. This subsection is necessary to provide an alternate method of compliance for a food service packaging manufacturer that produces a reusable food service packaging item and already has a method in place to ensure consistent use and durability of its product, as opposed to incurring the financial burden of demonstrating compliance by meeting the certification requirements of subsection (a)(1).

CalRecycle revised this subsection in the Third Draft Proposed Regulations to clarify that express, written warranties are provided to the purchasers of the food service packaging items, and to clarify the conditions under which a manufacturer must replace a food service packaging item under warranty. This revision was made to ensure manufacturers understand the criteria that must be met in this subsection. The department also changed “food service packaging item can be reused” to “it will remain reusable” because “reusable” is the term used in Section 17989.3 and thus more precisely describes the scope of the required warranty.

#### **§17989.4. Recyclable Food Service Packaging Criteria.**

##### **Subsection 17989.4(a) – No substantive changes**

Subsection (a) establishes that a recyclable food service packaging item included on the List must meet the public health and litter impacts criteria in Section 17989.2 and the three criteria listed in the following subsections. This subsection is necessary to inform food service packaging manufacturers and food service facilities of all the criteria the department will use to determine whether a food service packaging item is recyclable.

##### **Subsection 17989.4(a)(1) – Updated in the Third Draft Proposed Regulations**

Subsection (a)(1) establishes that a food service packaging item must be a minimum of two inches, measured in two dimensions. This subsection is necessary to ensure food service packaging items can be captured for recycling by processing equipment at material recovery facilities (MRFs). Food service packaging items smaller than two inches are not likely to be recovered and are typically disposed. The Association of Plastic Recyclers “Guide for Plastics Recyclability”<sup>28</sup> states that items smaller than two inches in two dimensions are typically lost from industry standard screen sizes and are considered contaminants and disposed. Without this size requirement, even materials that meet all other “recyclable” criteria will not be processed and aggregated for recovery.

CalRecycle revised this subsection in the Third Draft Proposed Regulations to remove ambiguity by clarifying that a food service packaging item must be measured in *at least* two dimensions.

##### **Subsection 17989.4(a)(2) – No substantive changes**

Subsection (a)(2) establishes that the food service packaging item must not contain additives that accelerate fragmentation of the food service packaging item. According to the Association of Plastic Recyclers,<sup>28</sup> degradable additives may shorten the useful life of the recycled product. This subsection is necessary to ensure food packaging items included on the List as recyclable to not contain additives that would contaminate the recycling stream and adversely impact recycling programs.

##### **Subsection 17989.4(a)(3) – Updated in the Third Draft Proposed Regulations**

Subsection (a)(3) establishes the criteria for the department to determine if a food service packaging item is regularly collected and recycled. This subsection is necessary to clarify the two pathways, as stated in the following two subsections, for a manufacturer to demonstrate that a food service packaging item is regularly collected

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<sup>28</sup> Association of Plastic Recyclers. The APR Design Guide for Plastics Recyclability. 2018.  
[https://plasticsrecycling.org/images/pdf/design-guide/Full\\_APR\\_Design\\_Guide.pdf](https://plasticsrecycling.org/images/pdf/design-guide/Full_APR_Design_Guide.pdf),

and recycled. The intent of this subsection is to provide flexibility for manufacturers to demonstrate compliance with the recyclable criteria.

CalRecycle removed “is regularly collected and recycled as follows” from this subsection in the Third Draft Proposed Regulations and replaced the language with “satisfies either of the following criteria” in order to clarify that to be recyclable a food service packaging item must meet the requirements of either subsection (A) or (B).

### **Subsection 17989.4(a)(3)(A) – Updated in the Second and Third Draft Proposed Regulations**

Subsection (a)(3)(A) establishes the first of two pathways to demonstrate a food service packaging item is collected and recycled. A minimum of ~~75~~60 percent (75 percent effective 2026) of recycling programs, as defined in subsection 17989(a)(~~24~~)(28), must collect the food service packaging material and the material must be sorted and aggregated into a single named bale by a minimum of ~~75-60~~ percent (75 percent effective 2026) of transfer/processors.

The requirements for sorting and aggregating into ~~single named material bale defined streams, and demonstrating sufficient commercial value,~~ aligns with PRC Section 42370.2(d)(6) that require the department to consider whether a food service packaging material is recycled in sufficient quantity and quality to maintain market value. ~~Single named material bales-Defined streams,~~ such as polyethylene terephthalate (PET) plastic or corrugated cardboard, have higher market value due to relatively little contamination when produced by the state’s existing collection, sorting, and recycling infrastructure. In contrast, the value of mixed material bales, such as plastics #3-7, is much lower due to the high costs of secondary sorting to screen out contaminants. Additionally, there are limited to non-existent markets for each of the resins in a #3-7 bale. Export markets for mixed material bales have largely vanished in the past several years due to China’s multiple policies that restrict imports of contaminated plastic and fiber bales, forcing more of these materials to remain in California where the market value of ~~single named material bales defined streams~~ is generally greater than mixed bales.

~~The minimum criteria of-~~The threshold of 75 percent of recycling programs and transfer/processors, to be implemented in 2026, is necessary to align this subsection with the state’s recycling goal for not less than 75 percent of solid waste generated to be source reduced, recycled, or composted by the year 2020, established by AB 341 (Chesbro, Chapter 476, Statutes of 2011). The lower initial collection and aggregation threshold of 60 percent of recycling programs and transfer/processors provides additional time for food service packaging manufacturers to assess and improve the design of their food service packaging items, for market values of recycled content to increase, and for the recycling industry to improve collection infrastructure.

This subsection is necessary in order to clarify the minimum percentage of recycling programs and transfer/processors that collect, sort, and aggregate a food service packaging material in order for the department to determine recyclability.

CalRecycle revised this subsection in the Second Draft Proposed Regulations to establish this phased collection, sortation, and aggregation approach. This change was made in response to stakeholder comments that urged the department to reflect the current state of the industry in California. The lower threshold of 60% was also informed by the FTC Green Guides threshold of 60% of the population having access to collection and is consistent with statutory direction to consider the FTC criteria.

CalRecycle further revised this section in the Third Draft Proposed Regulations to clarify that all materials that make up a food service packaging item must meet the criteria in this subsection. The department deleted the requirement that materials be sorted into “single named material bales” and clarified that materials must “have sufficient commercial value to be marketed for recycling” and be “sorted and aggregated into defined streams.” These changes were made in response to comments asserting that not all materials that get recycled are sorted into single-named bales. This revision more directly reflects criteria specified in statute to ensure that a material “regularly becomes feedstock that is used in the production of new products” and “is recycled in sufficient quantity, and is of sufficient quality, to maintain a market value.” Lastly, this section was also revised such that the 60-percent recovery requirement is in effect until January 1, 2026, not December 31, 2025, to ensure that a requirement is in effect prior to the increase that goes into effect on January 1, 2026.

#### **Subsection 17989.4(a)(3)(B) – Updated in the Second and Third Draft Proposed Regulations**

Subsection (a)(3)(B) establishes a second approach to demonstrate recyclability of a food service packaging item. Takeback programs, as defined in subsection 17989(a), must collect a minimum of ~~75~~ 60 percent (75 percent effective 2026) of food service packaging items for reuse or recycling in order for the department to consider the item recyclable. The takeback program option provides an alternative for applicants to demonstrate recyclability of a food service packaging item. Similar to subsection (a)(3)(A), ~~the criteria threshold of 75 percent, to be implemented in 2026,~~ aligns this subsection with the state’s recycling goal for not less than 75 percent of solid waste generated to be source reduced, recycled, or composted by the year 2020 established by AB 341 (Chesbro, Chapter 476, Statutes of 2011). As with subsection (a)(3)(A), the lower initial threshold of 60 percent provides food service packaging manufacturers time to work towards meeting this stricter requirement. This subsection is necessary to provide an alternative method for food service packaging items that may not meet the

recycling program criteria in subsection (a)(3)(A) to meet the recyclable criteria and to allow for a regional approach pursuant to PRC Section 42370.2(b)(3).

CalRecycle revised this subsection in the Second Draft Proposed Regulations to establish a phased approach for takeback programs, consistent with the phased approach in subsection (a)(3)(A). The takeback program must collect a minimum of 50 percent of the food service packaging items it distributed for recycling in order for the department to consider the item recyclable. This threshold increases to 75 percent by 2026, consistent with the other thresholds set in this Article.

CalRecycle further revised this subsection in the Third Draft Proposed Regulations to clarify that a takeback program “recovers” rather than “collects” food service packaging items to ensure that the regulation does not confuse this action with the term “collected” as defined in subsection 17989(a)(3). This subsection was also revised to establish that the recovery threshold applies to food service packaging items that are distributed at food service facilities to ensure that the documentation provided in the application align with statute. The department also added a requirement for all food service packaging items recovered in a takeback program to have sufficient commercial value to be marketed for recycling, to be consistent with the requirement stated in subsection (3)(A). The term “sufficient commercial value to be marketed for recycling” replaced the term “single named material bale” used in previous draft regulations. Lastly, for the reason stated in subsection 17989.4(a)(3)(A), the 60-percent recovery requirement was revised to January 1, 2026.

**Subsection 17989.4(a)(3)(B)(i) – Subsection removed from the Third Draft Proposed Regulations**

~~Subsection (a)(3)(B)(i) establishes that takeback programs that include reuse must indicate how many times the food service packaging item may be reused. This subsection is necessary so that the department can evaluate the number of times a food service packaging item may be reused prior to being recycled and to consider reuse, which is preferable to recycling, when evaluating if 75 percent of the items collected by the takeback program are transported to a transfer/processor or recycling facility for aggregation.~~

CalRecycle removed this subsection in the Third Draft Proposed Regulations and revised the criteria in subsection (a)(3)(B) to clarify that all food service packaging items in a takeback program must be recycled at the end of their useful lives, regardless of how many times they were reused. The change made to the recyclable criteria resulted in this subsection no longer being necessary.

**Subsection 17989.4(a)(3)(B)(ii) – Subsection removed from the Third Draft Proposed Regulations**

~~Subsection (a)(3)(B)(ii) establishes that a minimum of 75 percent of food service packaging items must be collected by the takeback program, and those items must be transported to a transfer/processor or recycling facility for aggregation into a single named material bale. This subsection is necessary to clarify that the food service packaging items used in a takeback program must be collected for recycling to meet the criteria.~~

CalRecycle moved the requirements of this subsection to subsection (a)(3)(B) in the Third Draft Proposed Regulations; the subsections were reordered to follow a more logical sequence.

**Subsection 17989.4(a)(3)(C) – Subsection removed from the Third Draft Proposed Regulations**

~~Subsection (a)(3)(C) establishes that mixed paper bales are considered a single-named material bale. This is necessary because the paper items comprising a mixed paper bale are placed into a pulper for recycling as one unit, as opposed to being separated prior to recycling. In contrast, mixed plastic bales require further processing into individual resin types prior to recycling.~~

CalRecycle removed this subsection in the Third Draft Proposed Regulations because the term “single-named material bales” was removed from subsection (a)(3) and is no longer used in the regulations.

**§17989.5. Compostable Food Service Packaging Criteria.**

**Subsection 17989.5(a) – No substantive changes**

Subsection (a) establishes that a compostable food service packaging item included on the List must meet the public health and litter impacts criteria in Section 17989.2 and the ~~four~~ three criteria listed in the following subsections. This subsection is necessary to inform food service packaging manufacturers and food service facilities of all the criteria the department will use to determine whether a food service packaging item is compostable.

**Subsection 17989.5(a)(1) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (a)(1) in the Third Draft Proposed Regulations to allow for food service packaging items to meet either of the two following criteria: the previous subsections (a)(1) and (a)(2), which were merged and renumbered to (a)(1)(A); and a new subsection (a)(1)(B), which added the option of a takeback program for compostable food service packaging items, mirroring a similar option in the recyclable



criteria. This new subsection was necessary for providing an alternative for compostable food service packaging items that could not meet the criteria in subsection (a)(1)(A).

**Subsection 17989.5(a)(1) – Updated in the Second Draft Proposed Regulations and updated and renumbered to (a)(1)(A) in the Third Draft Proposed Regulations**

Subsection (a)(1)(A) establishes that a minimum of ~~75~~ 50 percent (75 percent effective 2026) of organics recycling programs must collect the food service packaging material for composting. PRC Section 42370.2(e)(3) requires the department to consider whether a food service packaging item is regularly collected. The minimum criteria of 75 percent, effective 2026, is necessary to align this subsection with the state’s recycling goal for not less than 75 percent of solid waste generated to be source reduced, recycled, or composted by the year 2020 established by AB 341 (Chesbro, Chapter 476, Statutes of 2011). This subsection clarifies the minimum percentage of organics recycling programs that must collect a food service packaging material in order for the department to determine it is compostable.

CalRecycle revised this subsection in the Second Draft Proposed Regulations to modify the collection threshold for composting programs from 75 percent to 50 percent and to establish this phased approach. This change reflected stakeholder comments that 75 percent was too high a threshold and that 50 percent more accurately represented the current state of the compost industry in California. A phased-in approach better reflects current infrastructure and aligns with the measurable collection and acceptance thresholds and diversion goals of SB 1383, (Lara, Chapter 395, Statutes of 2016). Additionally, this approach aligns with that of subsection 17989.4(a)(3).

CalRecycle further revised this subsection in the Third Draft Proposed Regulations to include the “accepted” criterion from previously numbered subsection 17989.5(a)(2) so that a food service packaging manufacturer can opt between two regulatory options: subsection 17989.5(a)(1) or (2). The “accepted” criterion is necessary to clarify that only the facilities that “accept” mixed materials, as defined in subsection 17989(a)(1), and not all composting facilities located in the state shall be counted toward the threshold. Compost facilities that knowingly accept compostable food service packaging must be permitted to accept food waste as the packaging used to serve prepared food will frequently be contaminated with food waste. The effective dates for the initial collection and acceptance criteria were revised such that they are in effect until January 1, 2026 to ensure that a requirement is in effect on December 31, 2025. Lastly, this section was also revised “organics recycling programs” to “organic waste recycling programs” to use consistent terminology within the regulation.

In the Final Version of the Proposed Regulations, CalRecycle fixed an error in the Third Draft Proposed Regulations, which inadvertently stated the January 1, 2026, threshold

for the “accepted” criterion as “50 percent” rather than “75 percent.” For several reasons, correcting this error was appropriate.

First, the error was obvious given the context of the rulemaking process, throughout which the public was on notice that the Department intended the “accepted” threshold to be 75 percent. The First Draft Proposed Regulations set the threshold at 75 percent, regardless of the date. As explained in the Initial Statement of Reasons, CalRecycle chose this target to adhere to the 75-percent waste-reduction target established by AB 341. In response to stakeholder comments, however, the Second Draft Proposed Regulations relaxed the criterion to 50 percent until 2026, at which point it would increase to 75 percent. This same accommodation (allowing until 2026 before stepping up to the 75-percent threshold that aligns with AB 341) appears multiple other times in the Third Draft Proposed Regulations (see subsections 17989.4(a)(3)(A)-(B) and 17989.5(a)(1)(B)).

Given this history, the Department clearly intended for a *different* threshold to take effect in 2026. The structure of this subsection reflects that intent: The first sentence goes through the “collected” and “accepted” criteria applicable *before* 2026, and the second sentence goes through the new criteria applicable as of 2026. Without the correction, the second sentence would be partially redundant because, for “accepted,” it would merely repeat the same threshold (50 percent) for 2026 that already applied *before* 2026, as stated in the first sentence.

**Subsection 17989.5(a)(1)(B) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (a)(1)(B) in the Third Draft Proposed Regulations to establish a takeback program option for compostable food service packaging items, mirroring the takeback program option for recyclable food service packaging items in subsection 17989.4(a)(3)(B). The takeback program option provides an alternative for applicants to demonstrate compostability of a food service packaging item. The takeback program must collect a minimum of 50 percent of the food service packaging items it distributed for composting in order for the department to consider the item recyclable. This threshold increases to 75 percent by 2026, consistent with the other thresholds set in this Article. The 50 percent and 75 percent thresholds align with the organic waste recycling targets established by SB 1383 for the State of California to source reduce, recycle, or compost 75 percent of its solid waste. This subsection is necessary to provide an alternative method for food service packaging items that may not meet the compostable program criteria in subsection (a)(1)(A) and to allow for a regional approach pursuant to PRC subsection 42370.2(b)(3).

**Subsection 17989.5(a)(2) – Updated in the Second Draft Proposed Regulations; removed from the Third Draft Proposed Regulations**

~~Subsection (a)(2) establishes that a food service packaging item must be accepted by a minimum of 75 percent of compost facilities permitted to accept mixed materials. This is necessary to clarify that only the facilities that “accept” mixed materials, as defined in subsection 17989(a)(1), and not all composting facilities located in the state shall be counted toward the 75 percent threshold. Only compost facilities permitted to accept mixed materials are included because only such facilities are permitted to accept food waste. Compost facilities that knowingly accept compostable food service packaging must be permitted to accept food waste as the packaging used to serve prepared food will frequently be contaminated with food waste. Similar to subsection (a)(1), the minimum criteria of 75 percent is necessary to align this subsection with the state’s recycling goal for not less than 75 percent of solid waste generated to be source reduced, recycled, or composted by the year 2020 established by AB 341.~~

CalRecycle revised this subsection in the Second Draft Proposed Regulations with new thresholds of 50 percent through 2025 and 75 percent effective January 1, 2026.

CalRecycle moved the requirements of this subsection to subsection (a)(1)(A) in the Third Draft Proposed Regulations; the subsections were reordered to follow a more logical sequence.

**Subsection 17989.5(a)(3) – Updated and renumbered to (a)(2) in the Third Draft Proposed Regulations**

~~Subsection (a)(3)(2) establishes the requirement for a food service packaging item to biodegrade in a “safe and timely manner” as defined in subsection 17989(a)(25). This is necessary as PRC 42370.2(e)(1) requires the department to consider whether a food service packaging item will break down in a safe and timely manner. This subsection is necessary to establish one of the requirements needed to ensure that plastic food service packaging items have been appropriately tested and certified demonstrated to biodegrade within the timeframes used by California commercial compost facilities that accept mixed materials in California prior to placement on the List.~~

CalRecycle revised this subsection in the Third Draft Proposed Regulations by adding that the food service packaging items must demonstrate they compost in a safe and timely manner by meeting the requirements of newly added subsections (A) and (B). This revision consolidates the biodegradation requirements from the previous definition of “safe and timely manner” into the compostability criteria. CalRecycle also revised this subsection in the Third Draft Proposed Regulations to clarify that the requirements only apply to food service packaging items that are plastic, plastic-coated, or plastic-containing. This removed potential ambiguity from the First and Second Draft Proposed Regulations.

**Subsection 17989.5(a)(2)(A) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (a)(2)(A) in the Third Draft Proposed Regulations to establish that a plastic, plastic-coated, or plastic-containing food service packaging item must meet the requirements of ASTM D6400-19 or D6868-19, as applicable, as demonstrated by test results from an ISO/IEC 17025:2017 accredited laboratory. This addition was in direct response to stakeholder feedback that the department should defer to ASTM standards for determining if a food service packaging item is compostable. ASTM D6400-19 and D6868-19 are widely adopted by the industry for determining the compostability of plastic food service packaging items.

**Subsection 17989.5(a)(2)(B) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (a)(2)(B) in the Third Draft Proposed Regulations to incorporate the requirement that a food service packaging item must demonstrate 90 percent biodegradation within 60 days, which had been previously included in the definition of “safe and timely manner.” This new subsection also added that compliance with the requirement of 90 percent biodegradation in 60 days must be demonstrated through tests conducted by an ISO/IEC 17025:2017 accredited laboratory and that test results be provided in a test report that includes a biodegradation curve or tabular data. These changes addressed stakeholder concerns that the regulations were using the term “third-party certification entity” in a way that was inconsistent with ASTM standards and that the department was modifying ASTM standards. The test report is a requirement of ASTM certification and does not necessitate any additional testing, data generation, or deviation from existing ASTM standards. This addition allows the department to set a stricter biodegradation requirement without interfering with ASTM standards or testing.

This subsection is necessary to establish criteria that ensure approved food service packaging items have been appropriately tested to biodegrade within the timeframes of typical California commercial compost facilities that accept mixed materials, including compostable food service packaging, during the course of routine operations.

**Subsection 17989.5(a)(4) – Updated in the Second Draft Proposed Regulations; updated and renumbered to (a)(3) in the Third Draft Proposed Regulations**

Subsection (a)(4)(3) establishes that food service packaging items labeled “compostable” must comply with the Federal Trade Commission Guides for the Use of Environmental Marketing Claims (Part 260 commencing with Section 260.1 of Subchapter B of Chapter I of Title 16 of the Code of Federal Regulations.) These

~~guidelines specify criteria that promote clear and easily identifiable environmental labeling with emphasis on scientifically substantiated claims regarding compostability and degradability~~ meet all applicable requirements in Chapter 5.7, Part 3, Division 30 of the Public Resources Code and Section 17580.5(a) of the Business and Professions Code. This subsection is necessary to ensure that all compostable food service packaging items abide by federal labeling laws in order to provide clear and easily identifiable environmental labeling for consumers.

CalRecycle revised this subsection in the Second Draft Proposed Regulations to clarify that it concerns California laws prohibiting misleading environmental marketing claims. Those laws incorporate standards from the Federal Trade Commission’s Guides for the Use of Environmental Marketing Claims (Green Guides). CalRecycle removed the express reference to the Green Guides because it is California law, not the Green Guides by themselves that directly govern deceptive marketing claims in California.

CalRecycle further revised this subsection in the Third Draft Proposed Regulations to clarify that the criterion that food service packaging items satisfy “the legal requirements to be lawfully labeled compostable” applies to compostable items generally, rather than only to products actually labeled “compostable.” This change was necessary to give the intended scope and effect to this criterion, as otherwise it would create a perverse incentive: it would be less stringent for food service packaging items that merely omit “compostable” from their labeling. The reference to the Federal Trade Commission Guides was also removed because Business and Professions Code Section 17580.5 already references the Green Guides.

#### **§17989.6. Application Requirements and Submittal Process.**

##### **Subsection 17989.6(a) – No substantive changes**

Subsection (a) establishes the information, as stated in the following subsections, that a food service packaging manufacturer, or person acting on its behalf, must submit to the department as part of an application to add a food service packaging item to the List. This subsection also clarifies the application must be submitted electronically. This is necessary in order to inform manufacturers of the information the department requires in the application, and to clarify the method of submittal.

##### **Subsection 17989.6(a)(1)(A) through (F) – No substantive changes**

Subsections (a)(1)(A) through (F) specify the information that must be submitted in the application for each food service packaging item or group of items. This information is necessary to assist the department in communicating with the food service packaging manufacturer, or person acting on their behalf. The contact name, contact title, company or organization name, mailing and physical addresses, phone number, email address, and manufacturer name are necessary to allow for efficient correspondence.

**Subsection 17989.6(a)(2) – No substantive changes**

Subsection (a)(2) specifies that the application must contain a statement that a food service packaging item or group of items is being submitted to be considered for evaluation against the reusable, recyclable, or compostable criteria. This subsection is necessary to clarify for the department which criteria should be used in its evaluation.

**Subsection 17989.6(a)(3) – Updated in the Second Draft Proposed Regulations**

Subsection (a)(3) specifies that the application must include a description of the food service packaging items or group of items. This subsection is necessary for the department to determine whether the food service packaging item meets the definition of “food service packaging type” under Section 17989(a)(11) and to confirm it is not one of the ~~excluded~~ types of food packaging ~~not subject~~ excluded from the requirements of the Act. In the case of a submission for a group of food service packaging items, it will also assist the department in determining whether a group submittal is possible or if food service packaging items need to be submitted separately for individual consideration.

CalRecycle revised this subsection in the Second Draft Proposed Regulations to include additional application requirements for the description of the food service packaging item, including the item’s type, name, and size. This change was made to be consistent with the information that will be available to food service facilities on the List, as outlined in subsection 17989.1(a)(2).

**Subsection 17989.6(a)(4) – Updated in the Second and Third Draft Proposed Regulations**

Subsection (a)(4) specifies that the application must include a description of the materials used to manufacture the food service packaging item or group of items. This subsection is necessary because the material is a fundamental component of determining compliance with the criteria and the department requires this information in order to perform its evaluation of a food service packaging item or group of items.

CalRecycle revised this subsection in the Second Draft Proposed Regulations to remove “as applicable” to ensure that all food service packaging items are clearly identified in the application to be considered on the List.

CalRecycle further revised this subsection in the Third Draft Proposed Regulations to include an example of a material type and to require that the description include identifying characteristics. This change clarifies the material information that must be included as part of the application and to reflect the revised definition of “material” under subsection 17989(18).

**Subsection 17989.6(a)(5) – No substantive changes**

Subsection (a)(5) specifies that the application must include documentation that the food service packaging item or group of items meet the public health criteria described in Section 17989.2(a)(1), if applicable. This subsection is necessary because it provides the department the necessary information to evaluate whether a food service packaging item meets the criteria established by Section 17989.2(a)(1). This information is not otherwise publicly available.

**Subsection 17989.6(a)(6) – No substantive changes**

Subsection (a)(6) specifies that the application must include the chemical name(s) and Chemical Abstract Services Registry Number(s) (CASRN(s)) to demonstrate compliance with the public health criteria required by Section 17989.2(a)(2). This subsection also clarifies that any food service packaging item that requires a Proposition 65 warning shall be disclosed in the application because it provides the department the necessary information to evaluate whether a food service packaging item meets the criteria established by Section 17989.2(a)(2). This information is not otherwise publicly available.

**Subsection 17989.6(a)(7) – No substantive changes**

Subsection (a)(7) specifies that the application must include the accreditation number(s) of the ISO/IEC 17025 laboratories that ~~served as the third-party certification entity and~~ performed the required testing to determine if the food service packaging met the applicable criteria for reusable, recyclable, or compostable. This is necessary to assist the department in reviewing whether the ~~third-party certification entity~~ testing laboratory meets the accreditation requirements.

**Subsection 17989.6(a)(8) – No substantive changes**

Subsection (a)(8) specifies that the application must include a declaration signed under penalty of perjury stating that all information and data submitted is true and correct. This subsection is necessary for completeness and to ensure food service packaging manufacturers are aware there is a legal responsibility to submit accurate and complete information.

**Subsection 17989.6(b) – Updated in the Third Draft Proposed Regulations**

Subsection (b) specifies that a food service packaging manufacturer must identify confidential or proprietary portions of the application to the department. This is necessary to clarify how a food service packaging manufacturer shall mark confidential or proprietary information, and that any unlabeled portions will be treated as a public document. It is also necessary that none of the confidential information be redacted prior to submission so that the department may still conduct its review by viewing all information in the submittal. The Public Records Act (PRA) and the department's

statutory and regulatory provisions on record treatment will apply to all submittals; however, this additional clarity signals to submitting manufacturers that their submittals are public documents and the actions they must take to protect and confidential, proprietary, or trade secret information in their submittals.

CalRecycle revised this subsection in the Third Draft Proposed Regulations to clarify that a food service packaging manufacturer shall label or identify all portions of their application that they request the department to maintain as confidential. This change was made to ensure confidential information that is submitted as part of applications are not made public through Public Records Act requests from stakeholders.

**Subsection 17989.6(c) – No substantive changes**

Subsection (c) specifies that an application for a reusable food service packaging item must include information demonstrating compliance with Section 17989.3. ~~test results from a third-party certification entity verifying that the food service packaging item maintains its shape, structure, and function after 125 cycles in a cleaning and sanitizing process or a copy of the manufacturer's warranty.~~ This is necessary in order for the department to evaluate whether a food service packaging item has met one of the criteria to be considered reusable. CalRecycle added two subsections in the Third Draft Proposed Regulations to provide the manufacturer with one of two options to comply with the reusable criteria specified in Section 17989.3(a)(1) or (2), as applicable.

**Subsection 17989.6(c)(1) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (c)(1) in the Third Draft Proposed Regulations to establish that test results from an ISO/IEC 17025:2017 accredited laboratory must be submitted to demonstrate compliance with subsection 17989.3(a)(1).

**Subsection 17989.6(c)(2) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (c)(2) in the Third Draft Proposed Regulations to establish that a copy of a manufacturer's express, written warranty must be submitted as part of the food service packaging item's application to demonstrate compliance with subsection 17989.3(a)(2).

**Subsection 17989.6(d) – No substantive changes**

Subsection (d) specifies that an application for a recyclable food service packaging item must include documentation to verify the food service packaging item meets the criteria in Section 17989.4. This is necessary to clarify that an application must include information as stated in the following four subsections in order for the department to



evaluate whether a food service packaging item has met the criteria to be considered recyclable.

**Subsection 17989.6(d)(1) – Updated in the Third Draft Proposed Regulations**

Subsection (d)(1) specifies that an application for a recyclable food service packaging item must include documentation to verify the food service packaging item meets minimum size requirements of two inches in two dimensions. This is necessary in order for the department to evaluate whether a food service packaging item has met one of the criteria to be considered recyclable.

CalRecycle revised this subsection in the Third Draft Proposed Regulations to specify that measurements must be provided in *at least* two dimensions for each food service packaging item being submitted as recyclable to remove ambiguity.

**Subsection 17989.6(d)(2) – Updated in the Third Draft Proposed Regulations**

Subsection (d)(2) specifies that an application for a recyclable food service packaging item must include a statement that the food service packaging item does not contain additives that cause fragmentation. This is necessary in order for the department to evaluate whether a food service packaging item has met one of the criteria to be considered recyclable.

CalRecycle revised this subsection in the Third Draft Proposed Regulations to clarify that the manufacturer must provide a statement that each food service packaging item in a group of items does not contain additives to initiate or accelerate fragmentation. This change was made to ensure the application for a group of food service packaging items demonstrates that each item meets the applicable criteria.

**Subsection 17989.6(d)(3) – Updated in the Second and Third Draft Proposed Regulations**

Subsection (d)(3) specifies that an application for a recyclable food service packaging item must include test results from ~~a third-party certification entity~~ an ISO/IEC 17025:2017 accredited laboratory demonstrating that total fluorine concentrations do not exceed 100 parts per million as required by subsection 17989.2(a)(3). This subsection also specifies that the test must be ~~conducted~~ completed within six months of the application submittal date, which reasonably ensures that the test results are relevant and rely on up-to-date methodologies. ~~This is necessary to ensure that food service packaging manufacturers have sufficient time to obtain third-party certification. The department concluded that six months is the minimum necessary timeframe for obtaining third-party certification, based on the protocol used by the Biodegradable~~

Products Institute<sup>29</sup> used to demonstrate that PFASs have not been intentionally added to food service packaging products.

CalRecycle revised this subsection in the Second Draft Proposed Regulations to clarify that a test to demonstrate compliance with subsection 17989.2(a)(3) may begin outside the six month timeframe, but that the test and the corresponding results must be completed within six months of the application submittal date. CalRecycle also added a requirement, originally provided in subsection 17989.6(d)(3)(A), that applications for a group of food service packaging items must include an explanation of how test results are representative of the entire group. These changes were made to ensure test results submitted to the department are representative of the food service packaging items.

CalRecycle further revised the language in this subsection in the Third Draft Proposed Regulations to require that the submitted test results be completed by an ISO/IEC 17025:2017 accredited laboratory and must specify the analytical method and instrumentation used to quantify the total fluorine results. This is necessary so that the department can verify that an appropriate method was used, as no standardized method has been developed yet to determine the total fluorine concentrations in food service packaging items.

#### **Subsection 17989.6(d)(4) – Updated in the Second Draft Proposed Regulations**

Subsection (d)(4) specifies that an application for a recyclable food service packaging item must include information demonstrating that the item is regularly collected for recycling by either a recycling program or a takeback program, according to the requirements of Section 17989.4(a)(3). This is necessary in order for the department to evaluate whether a food service packaging item has met one of the criteria to be considered recyclable.

CalRecycle revised this subsection in the Second Draft Proposed Regulations to remove “as applicable.” This change clarifies that all applications for a recyclable food service packaging item should include information demonstrating that the item is regularly collected and recycled. Two subsections were added in the Third Draft Proposed Regulations to provide the manufacturer with two options to comply with the criteria specified in Section 17989.4(a)(3).

#### **Subsection 17989.6(d)(4)(A) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (d)(4)(A) in the Third Draft Proposed Regulations to establish the requirements needed to demonstrate that materials comprising the food

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<sup>29</sup> Biodegradable Products Institute. *Position on Fluorinated Chemicals*. 2019. Accessed March 2, 2020. <https://bpiworld.org/page-1857568>

service packaging item shall have sufficient commercial value to be marketed for recycling pursuant to subsection 17989.4(a)(3). This subsection provides examples of the types of documents and information that could be provided in an application. This subsection is necessary to provide clarity regarding how applications can satisfy the “sufficient commercial value to be marketed for recycling” requirement.

**Subsection 17989.6(d)(4)(B) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (B) in the Third Draft Proposed Regulations to establish, via subsections (B)(i) through (v), the information that must be submitted in the application for a takeback program to meet the requirements of subsection 17989.4(a)(3)(B). This addition is necessary in order to inform manufacturers of the information the department requires in the application.

**Subsection 17989.6(d)(4)(B)(i) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (B)(i) in the Third Draft Proposed Regulations to require a manufacturer to include the name and physical address of the food service facilities dispensing food service packaging items that are in or intended to be in the takeback program. This information is necessary for the department to verify the existence of the takeback program.

**Subsection 17989.6(d)(4)(B)(ii) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (B)(ii) in the Third Draft Proposed Regulations to establish application requirements particular to takeback programs that have been operating for at least one year. For such takeback programs, an application must demonstrate that the program met the annual percentage recovery requirement for at least one 12-month period during the five years immediately preceding the date of the application. This addition is necessary to ensure that the department receives adequate information to evaluate whether such takeback programs comply with subsection 17989.4(a)(3)(B).

**Subsection 17989.6(d)(4)(B)(iii) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (B)(iii) in the Third Draft Proposed Regulations to establish application requirements particular to takeback programs that have been operating less than one year. For such takeback programs, an application must provide the date the program began operating and demonstrate that the program’s performance to date, extrapolated over an entire year, satisfies the annual percentage recovery

requirement. This addition is necessary to ensure that the department receives adequate information to evaluate whether such takeback programs comply with subsection 17989.4(a)(3)(B). This change is also necessary to account for the fact that the requirements of subsection (B)(ii) cannot apply to takeback programs until they have been operating for at least one year.

**Subsection 17989.6(d)(4)(B)(iv) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (B)(iv) in the Third Draft Proposed Regulations to establish application requirements particular to takeback programs that have not yet begun operating. For such takeback programs, inclusion of a food service packaging item on the List will not occur until the program actually begins operating and will be conditioned on the applicant supplementing the application with information regarding the program's performance during its first seven months of operating. This addition is necessary to ensure that the department receives adequate information, including the supplemental information, to evaluate whether such takeback programs can reasonably be expected to comply with subsection 17989.4(a)(3)(B). This change is also necessary to account for the fact that the requirements of subsection (B)(ii) and (B)(iii) cannot apply to takeback programs that have not yet begun operating.

**Subsection 17989.6(d)(4)(B)(v) – New Subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (B)(v) in the Third Draft Proposed Regulations to establish additional application requirements that apply to all takeback programs that have not been in operation for at least one year, including those that have not begun operations. For all such takeback programs, inclusion of a food service packaging item on the List will be conditioned on the applicant supplementing the application with information regarding the program's performance over at least one full year. This addition is necessary to ensure that the department receives adequate information, including the supplemental information, to evaluate whether such takeback programs comply with subsection 17989.4(a)(3)(B). This change is also necessary to account for the fact that the requirements of subsection B)(ii) cannot apply to takeback programs until they have been operating for at least one year.

**Subsection 17989.6(e) – No substantive changes**

Subsection (e) specifies that an application for a compostable food service packaging item must include documentation to verify the food service packaging item meets the criteria in Section 17989.5. This is necessary to clarify that an application must include information as stated in the following five subsections in order for the department to

evaluate whether a food service packaging item has met the criteria to be considered compostable.

**Subsection 17989.6(e)(1) – Updated in the Third Draft Proposed Regulations**

Subsection (e)(1) specifies that an application for a compostable food service packaging item must include information demonstrating that the item is regularly collected for composting as required by subsection 17989.5(a)(1). This is necessary in order for the department to evaluate whether a food service packaging item has met one of the criteria to be considered compostable.

CalRecycle revised this subsection in the Third Draft Proposed Regulations to clarify that each food service packaging item, not material, must meet the applicable threshold criteria. This revision was required to be consistent with section 17989.5.

**Subsection 17989.6(e)(1)(A) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (A) in the Third Draft Proposed Regulations to establish, via subsections (A)(i) through (v), the information that must be submitted in the application for a takeback program to meet the requirements of subsection 17989.5(a)(1)(B). This addition is necessary to inform manufacturers of the information the department requires in the application.

**Subsection 17989.6(e)(1)(A)(i) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (A)(i) in the Third Draft Proposed Regulations to require a manufacturer to include the name and physical address for food service facilities dispensing food service packaging items that are in or intending to be in the takeback program. This addition is necessary to assist the department in verifying the existence of the takeback program.

**Subsection 17989.6(e)(1)(A)(ii) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (A)(ii) in the Third Draft Proposed Regulations to establish application requirements particular to takeback programs that have been operating for at least one year. For such takeback programs, an application must demonstrate that the program met the annual percentage recovery requirement for at least one 12-month period during the five years immediately preceding the date of the application. This addition is necessary to ensure that the department receives adequate information to evaluate whether such takeback programs comply with subsection 17989.5(a)(1)(B).

**Subsection 17989.6(e)(1)(A)(iii) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (A)(iii) in the Third Draft Proposed Regulations to establish application requirements particular to takeback programs that have been operating less than one year. For such takeback programs, an application must provide the date the program began operating and demonstrate that the program's performance to date, extrapolated over an entire year, satisfies the annual percentage recovery requirement. This addition is necessary to ensure that the department receives adequate information to evaluate whether such takeback programs comply with subsection 17989.5(a)(1)(B). This change is also necessary to account for the fact that the requirements of subsection (A)(ii) cannot apply to takeback programs until they have been operating for at least one year.

**Subsection 17989.6(e)(1)(A)(iv) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (A)(iv) in the Third Draft Proposed Regulations to establish application requirements particular to takeback programs that have not yet begun operating. For such takeback programs, inclusion of a food service packaging item on the List will not occur until the program actually begins operating and will be conditioned on the applicant supplementing the application with information regarding the program's performance during its first seven months of operating. This addition is necessary to ensure that the department receives adequate information, including the supplemental information, to evaluate whether such takeback programs can reasonably be expected to comply with subsection 17989.5(a)(1)(B). This change is also necessary to account for the fact that the requirements of subsection (A)(ii) and (A)(iii) cannot apply to takeback programs that have not yet begun operating.

**Subsection 17989.6(e)(1)(A)(v) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (A)(v) in the Third Draft Proposed Regulations to establish additional application requirements that apply to all takeback programs that have not been in operation for at least one year, including those that have not begun operations. For all such takeback programs, inclusion of a food service packaging item on the List will be conditioned on the applicant supplementing the application with information regarding the program's performance over at least one full year. This addition is necessary to ensure that the department receives adequate information, including the supplemental information, to evaluate whether such takeback programs comply with subsection 17989.5(a)(1)(B). This change is also necessary to account for the fact that the requirements of subsection (A)(ii) cannot apply to takeback programs until they have been operating for at least one year.

**Subsection 17989.6(e)(2) – Updated in the Second Draft Proposed Regulations; removed from the Third Draft Proposed Regulations**

~~Subsection (e)(2) specifies that an application for a compostable food service packaging item must include information demonstrating that the item is regularly accepted by compost facilities permitted to accept mixed materials and that the material is not screened out for disposal as required by 17989.5(a)(2). This is necessary in order for the department to evaluate whether an item has met one of the criteria to be considered compostable.~~

CalRecycle revised this subsection in the Second Draft Proposed Regulations to clarify that the information included in an application must demonstrate the material meets the criteria in subsection 17989.5(a)(2). This change was made to ensure the appropriate information is submitted to demonstrate a food service packaging item meets the threshold criteria.

CalRecycle removed this subsection in the Third Draft Proposed Regulations, as this requirement is now incorporated in subsection (e)(1).

**Subsection 17989.6(e)(3) – Updated in the Second Draft Proposed Regulations; updated and renumbered to (e)(2) in the Third Draft Proposed Regulations**

~~Subsection (e)(3)(2) specifies that an application for a compostable food service packaging item must include test results from a third-party certification entity an ISO/IEC 17025:2017 accredited laboratory to demonstrate the item biodegrades in a safe and timely manner. This is necessary in order for the department to evaluate whether a food service packaging item has met one of the criteria to be considered compostable.~~

CalRecycle revised this subsection in the Second Draft Proposed Regulations to clarify that test results must demonstrate that a food service packaging item composts in a safe and timely manner and that a test demonstrating compliance with this requirement must be completed within six months of the application submittal date. CalRecycle also added a requirement, originally as subsection (e)(3)(A), to establish that applications for a group of food service packaging items must include an explanation of how test results are representative of the entire group. These changes were made to ensure results submitted to the department are representative of the food service packaging items.

CalRecycle revised this subsection in the Third Draft Proposed Regulations to clarify that an application for a compostable food service packaging item that is “plastic, plastic-coated, or plastic-containing” must include documentation that demonstrates the food service packaging item meets the requirements of ASTM D6400-19 or ASTM D6868-19. This revision was necessary because the requirements under Section 17989.5(a)(2) for demonstrating that a food service packaging item composts in “safe and timely manner” only apply to such items. Additionally, the department revised this

subsection to establish that the test results must be completed within a five-year timeframe prior to the date of submission, as stakeholders expressed that the applicable tests and laboratories take longer than six months. This change was made to ensure that the ASTM certification is as representative as practical.

CalRecycle also revised the subsection structure in the Third Draft Proposed Regulations to remove subsection (e)(3)(A) and incorporate the requirement into the new subsection (e)(2); the subsections were reordered to follow a more logical sequence.

**Subsection 17989.6(e)(3) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (e)(3) in the Third Draft Proposed Regulations to establish that food service packaging items that are “plastic, plastic-coated or plastic-containing” must provide a copy of the ASTM D6400-19 or ASTM D6868-19 test report that shows the percent biodegradation achieved at 60 days for the food service packaging item or group of items. If the test report is being submitted for a group of food service packaging items, the applicant must explain how it is representative of the group of items. This addition is necessary to ensure that information demonstrating compliance with subsection 17989.5(a)(2)(B) is submitted as part of the application.

**Subsection 17989.6(e)(4) – Updated in the Second and Third Draft Proposed Regulations**

Subsection (e)(4) specifies that an application for a compostable food service packaging item must include test results from ~~a third-party certification entity~~ an ISO/IEC 17025:2017 accredited laboratory demonstrating that total fluorine concentrations do not exceed 100 parts per million as required by subsection 17989.2(a)(3). This subsection also specifies that the test must be ~~conducted~~ completed within six months of the application submittal date. This is necessary to ensure that food service packaging manufacturers have sufficient time to obtain ~~third-party certification~~ test results. The department concluded that six months is the ~~minimum~~ necessary timeframe for obtaining test results ~~third-party certification~~, based on the protocol used by the Biodegradable Products Institute used to demonstrate that PFASs have not been intentionally added to food service packaging products.

CalRecycle revised this subsection in the Second Draft Proposed Regulations to clarify that a test to demonstrate compliance with subsection 17989.2(a)(3) may begin outside the six month timeframe, but that the test and the corresponding results must be completed within six months of the application submittal date. CalRecycle also added a requirement, originally provided in subsection (e)(4)(A), that applications for a group of food service packaging items must include an explanation of how test results are



representative of the entire group. These changes were made to ensure test results submitted to the department are representative of the food service packaging items.

CalRecycle further revised this subsection in the Third Draft Proposed Regulations to require that the submitted test results be completed by an ISO/IEC 17025:2017 accredited laboratory and must specify the analytical method and instrumentation used to quantify the total fluorine results. This is necessary so that the department can verify that an appropriate method was used for the analysis, as no standardized method has been developed yet to determine the total fluorine concentrations in food service packaging items.

CalRecycle also revised the subsection structure in the Third Draft Proposed Regulations to remove (e)(4)(A) and incorporate the requirement into (e)(4).

**Subsection 17989.6(e)(5) – Updated in the Second and Third Draft Proposed Regulations**

Subsection (e)(5) specifies that an application for a compostable food service packaging item must include a statement that the food service packaging item or group of items ~~complies with~~ satisfies the requirements of subsection 17989.5(a)(3) Federal Trade Commission's guidelines for the use of environmental marketing claims. This subsection is necessary to clarify that compostable food service packaging must meet ~~federal~~ existing standards for environmental claims and the information that must be provided for the department to evaluate whether a food service packaging item has met one of the criteria to be considered compostable.

CalRecycle revised this subsection in the Second Draft Proposed Regulations to replace the reference to the Federal Trade Commission Guides (Green Guides) with a reference to Business and Professions Code Section 17580.5. This change was made because the FTC Guides do not state formal requirements or prohibitions, in contrast to Business and Professions Code Section 17580.5, which forbids misleading marketing and references the FTC Guides to help define what constitutes an "environmental marketing claim."

CalRecycle further revised this subsection in the Third Draft Proposed Regulations to remove references to the Business and Professions Code, and instead clarify that an application for a compostable food service packaging item or group of items must satisfy the requirements of subsection 17989.5(a)(3) regarding labeling.

**Subsection 17989.6(f) – No substantive changes**

Subsection (f) specifies that applications will be reviewed in the order in which they are received. This subsection is necessary to clarify the application review process and to

establish a neutral and unbiased method for determining the order in which applications will be evaluated.

**Subsection 17989.6(f)(1) – No substantive changes**

Subsection (f)(1) defines the term “complete” as it relates to the department’s review of applications. This subsection is necessary because it clarifies the review that the department will conduct under subsection (f) is limited to ensuring a food service packaging manufacturer’s application is complete. This means the department will not review the detailed contents of the applications to ensure compliance with statutory requirements prior to conducting a completeness review. The department’s review is initially limited to making sure all of the required components are included thus rendering the application “complete.”

**Subsection 17989.6(f)(1)(A) – Updated in the Second Draft Proposed Regulations**

Subsection (f)(1)(A) specifies that the department shall notify a food service packaging manufacturer, or person acting on its behalf, if the application is complete. This subsection is necessary to clarify that the department will provide a response affirming completeness of an application.

CalRecycle revised this subsection in the Second Draft Proposed Regulations to include a 30-day timeframe from the date of receipt for the department to review applications for completeness. This change was made to establish the process that the department will take to determine if an application is complete.

**Subsection 17989.6(f)(1)(B) – Updated in the Second and Third Draft Proposed Regulations**

Subsection (f)(1)(B) informs food service packaging manufacturers that they will be notified by the department if an application is incomplete and will be provided ~~an allotted~~ a deadline to submit the missing information. This subsection is necessary to inform manufacturers that they have an opportunity to submit missing documentation in the event the application is incomplete. ~~It is necessary to specify the amount of time the food service packaging manufacturer has in order for the department to maintain clear records for applications that are actively seeking evaluation and those that are not.~~

CalRecycle revised this subsection in the Second Draft Proposed Regulations to clarify that the food service packaging manufacturer is allowed a specified number of days to provide supporting documentation. This change was made to ensure that food service packaging manufacturers have a consistent deadline to submit supporting documentation for the department to consider in evaluating their application.

CalRecycle further revised this subsection in the Third Draft Proposed Regulations to include an example of when the department may deem an application incomplete, and

to specify that manufacturers will be allowed 30 days to provide additional information and documentation to the department following notification of the department's determination. These changes were made to clarify the process that the department will take in evaluation whether an application meets the applicable criteria.

**Subsection 17989.6(f)(2) – No substantive changes**

Subsection (f)(2) specifies that the department will evaluate each complete application to determine if a food service packaging item or group of items meets the applicable criteria. This subsection is necessary to clarify that the department will only conduct detailed reviews of a “complete” application, defined in subsection (f)(1).

**Subsection 17989.6(f)(2)(A) – No substantive changes**

Subsection (f)(2)(A) establishes that the department will add the food service packaging items to the List and will notify the applicant accordingly. This subsection is necessary to clarify to food service packaging manufacturers what will happen after the department's reviews and when food service packaging items will be added to the List.

**Subsection 17989.6(f)(2)(B) – Updated in the Second and Third Draft Proposed Regulations**

Subsection (f)(2)(B) specifies that if the department determines that a food service packaging item does not meet the criteria, the applicant will be notified and the item will not be added to the List. This subsection is necessary to clarify the process for when an application does not meet the criteria and a food service packaging item is not added to the List.

CalRecycle revised this subsection in the Second Draft Proposed Regulations to clarify the process that the department will follow in notifying the food service packaging manufacturer of the basis for the determination that their food service packaging item does not meet the applicable requirements and allow them to provide supplemental documentation or information. This change was made to allow food service packaging manufacturers a process to provide supplemental information to the department to further support their application.

CalRecycle further revised this subsection in the Third Draft Proposed Regulations to specify that the department shall notify a manufacturer before finalizing the determination, and that a manufacturer may provide additional documentation and information within 30 days of receiving the notification. These changes were made to ensure a consistent and transparent process exists for communicating with food service packaging manufacturers regarding their applications and to establish that the department will take supplemental information into consideration prior to making its final determination.

**Subsection 17989.6(f)(3) – No substantive changes**

Subsection (f)(3) specifies that the department will maintain the confidentiality of information submitted in each application as required by laws and regulations governing submittals of documents. This section states existing laws governing records submitted to the department, but is necessary for completeness, to be responsive to stakeholder concerns, and to underscore to manufacturers the department's obligations and procedures to maintain confidentiality.

**Subsection 17989.6(g) – New subsection added in the Second Draft Proposed Regulations; updated in the Third Draft Proposed Regulations**

CalRecycle added subsection (g) in the Second Draft Proposed Regulations to establish that a food service packaging manufacturer must submit a new application after a non-aesthetic change is made to an approved food service packaging item. This addition is necessary to ensure that a new application is submitted after changes, other than aesthetic changes, are made so that the department may review and evaluate whether the changes affect the food service packaging item's material composition, construction, or compliance with the applicable criteria.

CalRecycle revised the language in the Third Draft Proposed Regulations to clarify that a new application must be submitted to the department for a food service packaging item prior to the continued sale of that item to a food service facility when a change, "other than an aesthetic change," is made to a food service packaging item on the List. This change clarifies when a new application must be submitted to the department after non-aesthetic changes are made.

**§17989.7. Noncompliant Food Service Packaging Inventories.**

**Subsection 17989.7(a) – New subsection added in the Third Draft Proposed Regulations**

CalRecycle added subsection (a) in the Third Draft Proposed Regulations to establish that a food service facility shall not dispense prepared food using food service packaging items that are not on the List on or after the date the List is published. This addition is necessary to fully implement the statute and to use the term "prepared food" which is defined in statute and uses terms that are not otherwise used in these regulations (i.e., "mass produced" and "cooking or food preparation technique") but are defined in these regulations.

**Subsection 17989.7(a) – Updated in the Second Draft Proposed Regulations; updated and renumbered to (b) in the Third Draft Proposed Regulations**

Subsection ~~(a)~~(b) clarifies that a food service facility may use its pre-existing food service packaging inventory, under the conditions described in subsections ~~(a)~~(b)(1) – ~~(a)~~(b)(4), if an approved food service packaging item or group of items is removed from the List. This subsection is intended to ensure that approved food service packaging items that have been purchased, but are subsequently removed from the List, are not unnecessarily disposed and to limit the financial burden placed on a food service facility when a food service packaging item is removed from the List.

CalRecycle revised this subsection in the Second Draft Proposed Regulations to clarify that the allowance for a food service facility to use existing inventory of food service packaging items that are not on the List under conditions in the following subsections applies to both the initial List and items that are removed from the List. This change was made to provide clarification to food service facilities that this subsection applies to food service packaging items that are not on the List, not just items that have been removed from the List, as had been indicated in the First Draft Proposed Regulations.

CalRecycle further revised this subsection in the Third Draft Proposed Regulations to clarify that food service facilities may only use food service packaging items on the List, except if any of the subsequent conditions are met. This change was made to ensure food service facilities understand what food service packaging items they may use to comply with the regulations and to provide clarification that any one of the conditions may be met as opposed to all simultaneously.

**Subsection 17989.7(a)(1) – Renumbered to (b)(1) in the Third Draft Proposed Regulations; no substantive changes**

Subsection ~~(a)~~(b)(1) clarifies that a food service facility may continue to use its pre-existing inventory of food service packaging item(s) if the food service facility possessed that specific inventory prior to the publication of the initial List or prior to the List subsequently being updated to remove that item. This subsection is necessary to clarify and implement statutory provisions using terminology defined in the regulations, with respect to one of the conditions in which a food service facility may use specific inventories of food service packaging items that are removed from the List. This language is modeled off of and is consistent with provisions in the Act governing use of packaging inventory prior to the adoption of these regulations to implement the Act.

**Subsection 17989.7(a)(2) – Renumbered to (b)(2) in the Third Draft Proposed Regulations; no substantive changes**

Subsection ~~(a)~~(b)(2) clarifies that a food service facility may continue to use its pre-existing inventory of food service packaging item(s) that were removed from the List if that food service packaging item was on the List when the food service facility took

possession of it. This subsection is necessary to clarify and implement statutory provisions using terminology defined in the regulations, with respect to one of the conditions in which a food service facility may use specific inventories of food service packaging items that are not on the List. This language is modeled off of and is consistent with provisions in the Act governing use of packaging inventory prior to the adoption of these regulations to implement the Act.

**Subsection 17989.7(a)(3) – Renumbered to (b)(3) in the Third Draft Proposed Regulations; no substantive changes**

Subsection ~~(a)~~(b)(3) clarifies that a food service facility may continue to use its pre-existing inventory of food service packaging items if that food service facility entered into a contract to purchase the food service packaging items prior to the List being published or subsequently updated to remove the item. This subsection is necessary to clarify and implement statutory provisions using terminology defined in the regulations, with respect to one of the conditions in which a food service facility may use specific inventories of food service packaging items that are not on the List. This language is modeled off of and is consistent with provisions in the Act governing use of packaging inventory prior to the adoption of these regulations to implement the Act.

**Subsection 17989.7(a)(4) – Renumbered to (b)(4) in the Third Draft Proposed Regulations; no substantive changes**

Subsection ~~(a)~~(b)(4) clarifies that a food service facility may continue to use its pre-existing inventory of food service packaging items if that food service facility entered into a contract to purchase the food service packaging items prior to the List being updated. This subsection is necessary to clarify and implement statutory provisions using terminology defined in the regulations, with respect to one of the conditions in which a food service facility may use specific inventories of food service packaging items that are not on the List. This language is modeled off of and is consistent with provisions in the Act governing use of packaging inventory prior to the adoption of these regulations to implement the Act.

**Subsection 17989.7(b) – Renumbered to (c) in the Third Draft Proposed Regulations; no substantive changes**

~~This subsection-~~Subsection (c) explains it is the responsibility of the food service facility to ensure that the food service packaging items it purchases are on the List. This is necessary to inform food service facilities that they are responsible for monitoring the List for updates to make sure any new, renewed, or updated contracts comply with the Act and regulations. This language is modeled off of and is consistent with provisions in the Act governing use of packaging inventory prior to the adoption of these regulations to implement the Act.

## **§17989.8. Records.**

### **Subsection 17989.8(a) – Renumbered to 17989.8 in the Third Draft Proposed Regulations; no substantive changes**

~~Subsection (a)~~ Section 17989.8 establishes that a food service facility shall provide the department reasonable and timely access to purchasing records for food service packaging items, ~~as specified in the following two subsections~~, within 60 days of a written request from the department. This subsection is necessary to align with PRC Section 42370.5(b) and to facilitate the department's reasonable and timely access to records to verify compliance with the Act. The timeframe of 60 days is intended to provide the food service facility sufficient time to provide the requested documents to the department. In the department's experience inspecting and reviewing records of similar types of regulated entities, 60 days is a reasonable and workable period of time for entities to gather and submit records to make the submittal timely without placing an unreasonable administrative burden on the regulated entity.

### **Subsection 17989.8(a)(1) – Subsection removed from the Third Draft Proposed Regulations**

~~Subsection (a)(1)~~ establishes the required information that a food service facility must provide to the department upon request in order for the department to verify a food service packaging item meets the reusability criteria of Section 17989.3. This subsection is necessary to specify that invoices or purchase orders are the records needed for the department to verify purchase of reusable food service packaging items. The date of purchase is required in order for the department to verify the reusable food service packaging item was on the List at time of purchase. The material, type, and manufacturer of the food service packaging item is required in order for the department to verify this information against the List. The number of food service packaging items purchased is necessary so the department may determine noncompliant food service packaging inventories.

CalRecycle removed this subsection in the Third Draft Proposed Regulations as Section 17989.8 applies to all food packaging items making this subsection no longer necessary.

### **Subsection 17989.8(a)(2) – Subsection removed from the Third Draft Proposed Regulations**

~~Subsection (a)(2)~~ establishes the required information that a food service facility must provide to the department upon request in order for the department to verify a food service packaging item meets the recyclable or compostable criteria of Sections 17989.4 and 17989.5. This subsection is necessary to specify that invoices or purchase orders are the records needed for the department to verify purchase of recyclable or

~~compostable food service packaging items. The date of purchase is required in order for the department to verify the recyclable or compostable food service packaging item was on the List at time of purchase. The material, type, and manufacturer of the food service packaging item is required in order for the department to verify this information against the List. The number of food service packaging items purchased is necessary so the department may determine noncompliant food service packaging inventories.~~

CalRecycle removed this subsection in the Third Draft Proposed Regulations as Section 17989.8 applies to all food packaging items making this subsection no longer necessary.

### **NON-SUBSTANTIAL CHANGES MADE PRIOR TO THE FINAL VERSION OF THE PROPOSED REGULATORY TEXT**

CalRecycle made the following non-substantive changes in the Final Version of the Proposed Regulations:

1. Subsection 17989(a)(11)(B) – the word “section” was capitalized to “Section”
2. Subsection 17989(a)(17) – the word “third-party” was revised to “third party” and commas were added
3. Subsection 17989(a)(18) – a comma was added
4. Subsection 17989.2(a)(1) – “25214.26” was not correctly underlined, and has been underlined in the Final Version
5. Subsection 17989.4(a)(3) – corrected the word “satisfies” to “satisfies”
6. Subsection 17989.4(a)(3)(A) – an extra space was removed
7. Subsection 17989.4(a)(3)(B) – an extra space was removed
8. Subsection 17989.5(a)(2) – an additional comma was added
9. Subsection 17989.6(a)(1)(C) – the word “address” was revised to “addresses”
10. Subsection 17989.6(d)(4)(A) – the words “comprising the food service packaging item” were moved to proper place in sentence to fix grammatical error
11. Subsection 17989.6(d)(4)(B)(iv) – the word “items” was revised to “item”
12. Subsection 17989.6(e)(1)(A)(iv) – the word “items” was revised to “item”
13. Subsection 17989.6(e)(2) – corrected “(2)For” to “(2) For” and added a comma
14. Subsection 17989.6(e)(3) – a comma was added

### **REASONABLE ALTERNATIVES TO THE PROPOSED REGULATORY ACTION - UPDATED**

The department considered two alternatives to the proposed regulations alternatives to the proposed regulations and determined that: 1) no alternative would be more effective in carrying out the purpose of the proposed regulation; 2) no alternative would be as effective and less burdensome to affected private persons; and 3) no alternative would



be equally effective and more cost-effective to affected private persons. As explained below, each alternative considered would be clearly less effective in carrying out the purpose of the regulations and could not be justified by potential decreases in the burden of compliance or economic impact, including to small businesses.

One alternative considered consists of two changes to the proposed regulations that would make the regulations less burdensome and would result in the inclusion of more materials on the List of Approved Food Service Packaging. The changes would include (1) reducing the criteria for ~~access to~~ collection of recyclable and compostable food service packaging items from 75 percent (effective 2026) ~~of communities having access to a permanent 60 percent flat rate of communities having access~~, and (2) reducing the criterion for compostable food service packaging items by removing the requirement that the item spends no more than 60 days in the active phase in the composting process. Rather, the degradation of the food service packaging item would align with the ASTM International (ASTM) standard D6400 which allows materials to break down within 84 – 180 days. The department anticipates these changes would allow polypropylene to be considered recyclable and a wide range of compostable plastic materials (such as polylactic acid (PLA), waxed paper products, and thick starch-based food service packaging items) to be considered compostable under this alternative. ~~There are no alternatives to the regulation that would lessen adverse impacts on small businesses because the scope of the entities covered by the Act cannot be modified by the regulations and the proposed regulations constitute the approach that would have the least adverse impact on small businesses. Additionally, there are no alternatives to the regulation that are less burdensome and equally effective in achieving the purposes of the regulation in a manner that achieves the purpose of the Act.~~

This first alternative was not selected because it would be less effective in carrying out the purposes of the regulation, would not significantly improve the standards by which materials are considered recyclable or compostable, and would still impose significant annual costs on regulated businesses of more than \$6 million, as explained in the Revised Economic and Fiscal Impact Statement. Even if that cost would entail a decreased economic impact on small businesses, this alternative was still unsatisfactory because it would significantly reduce the overall effectiveness of the proposed regulations. Moreover, because SB 1335 requires the department to apply uniform standards for what it considers reusable, recyclable, and compostable, there is no reasonable way for this alternative to be modified so that it would selectively reduce the economic burden of the regulations with respect to small businesses.

This alternative would significantly harm the effectiveness of the regulations, which are needed to clarify the performance standards, and collection and processing requirements to ensure products are recycled and composted. Under this alternative,

relying on the biodegradation timeline established in the ASTM D6400-19 standard would allow more materials to be approved, but would not ensure that they break down under operating conditions utilized by commercial compost facilities in California. Food service packaging items that do not biodegrade at commercial compost facilities would either be disposed of or would remain in the finished compost. Undegraded materials in finished compost could include microplastics and chemical additives and would potentially contaminate agricultural land and food crops. To prevent this contamination, this alternative was not selected, and instead the proposed regulations include more stringent performance standards that align with operating conditions utilized by commercial compost facilities in California.

Another alternative considered by the department would make two major changes to the proposed regulation that would result in a more detailed List by (1) requiring the department to establish five regional Lists rather than a single statewide List and (2) requiring food service facilities to maintain and provide the department with access to additional records. This alternative was considered as a way to account for regional variability in collection infrastructure, recycling and composting facilities, and recycling rates throughout the state. Regional Lists may prevent disruptions to small, local programs and allow the continued use of certain materials in areas that have developed the infrastructure to process them.

In order to implement the five regionalized Lists, a number of adjustments would be needed in the regulations as follows:

1. The department would use the five geographical regions from its waste characterization studies<sup>30</sup>. These studies utilize shared characteristics, such as demographics, climate geography, and economics to identify five regions: bay area, coastal, mountain, southern, and central valley.
2. The department would develop and maintain five Lists; ensuring that the Department of General Services has all necessary information to implement contracts relevant to these five regional lists.
3. Food service packaging item manufacturers who submit an application for evaluation of their food service packaging items would be required to provide regional-specific information in each region for which an application is being submitted. This would require the food service packaging item manufacturers to fund studies to determine regional recycling and composting acceptance rates by conducting bale studies and characterizing loads of waste at material recovery facilities. Bale studies would determine which materials are being aggregated for

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<sup>30</sup> CalRecycle. Statewide Waste Characterization Study. 2008.  
<https://www2.calrecycle.ca.gov/Publications/Download/911>

sale and processing, while characterization studies of the waste would determine what materials that are collected do not get recycled.

This second alternative would also require food service facilities to maintain and provide records regarding (1) the types and quantities of food service packaging purchased and used, and (2) whether their local recycling or composting service providers accept each of the food service packaging items for recycling or composting, as requested. The records would be accessed by the department to ensure the five regional Lists are up to date and accurate.

This alternative was not selected because the department determined the increased record keeping requirements would impose an undue burden on food service facilities, most of whom are small businesses, and food service packaging item manufacturers without a corresponding increase in benefits. As reflected in the Revised Economic and Fiscal Impact Statement, the additional recordkeeping and related administrative burdens would impose increased costs for affected businesses generally; therefore, this alternative would not lessen the adverse economic impact on small businesses.

This alternative would create a confusing and fragmented recycling system, such that it would also be less effective in carrying out the purpose of the regulations. For California's recycling and composting system to be effective consumers need to be able to understand what to do with their food service packaging items at end of life and a system must be in place to effectively manage those materials. When materials are only recyclable or compostable regionally this creates confusion leading to increased contamination and decreasing the quality of materials being aggregated for further processing. The proposed regulation establishes a set of criteria for recyclability and compostability that will ensure consistency for successful recycling and composting of food service packaging items statewide.

**INITIAL DETERMINATION THAT THE ACTION WILL NOT HAVE A SIGNIFICANT ADVERSE ECONOMIC IMPACT ON BUSINESSES – UPDATED**

The department conducted an economic analysis, as required by the rulemaking process and has made the initial finding that the proposed regulations will not have a significant adverse economic impact on businesses and will not affect the ability of California businesses to compete with businesses in other states.

Typical and small businesses are expected to incur initial costs of \$1,050 and \$600, respectively, in ongoing annual compliance costs to purchase compliant food service packaging items. Food service facilities will experience slightly increased costs for some of the food service packaging items they purchase to serve prepared food. Food service packaging manufacturers will experience decreased demand for products that are not approved as reusable, recyclable, or compostable.

Food service facilities are not expected to be adversely impacted as a result of this regulation because the increased costs incurred by food service facilities will be minimal compared to their total sales. This regulation is expected to increase costs by \$0.02 per food service packaging item and the increased costs will primarily be passed on to customers purchasing meals. Food service facilities will experience some increased food service packaging costs if they are currently purchasing less expensive, non-compliant packaging.

Food service packaging manufacturers are not expected to be adversely impacted because the regulations impact a small fraction of their customers and product lines. Most food service packaging manufacturers with 100 or more employees make some food service packaging items that CalRecycle anticipates will be compliant and some items that are anticipated to be noncompliant. Smaller food service packaging manufacturers may already be producing food service packaging items that will be considered compliant or may adjust their manufacturing process, so their products comply with the new regulations. Staff evaluated product manufacturer webpages to identify the types of products currently produced. This investigation revealed that most companies manufacture a wide range of food service packaging types that include both compliant and noncompliant materials. For example, Dart manufactures food service packaging items made from polystyrene, polyethylene terephthalate (PET), paper, sugar cane, and polylactic acid. Pactiv manufactures items made from polypropylene, aluminum, polystyrene, polylactic acid, paper, and molded fiber. Smaller businesses have less diverse product portfolios. For example, Zenith manufactures PET packaging items, and World Centric manufactures paper fiber packaging items. The research results indicate that both large and small manufacturers make compliant packaging and support the finding that no businesses will be eliminated.

As a result of changes made to the regulation subsequent to the initial determination described above, CalRecycle published a Revised Economic and Fiscal Impact Statement. Based on the findings in the attached Form 399, the department has determined that the proposed regulations will not have a significant adverse economic impact on businesses, will not affect the ability of California businesses to compete with businesses in other states, and therefore does not reach the threshold to be considered a major regulation subject to the requirement of conducting a Standardized Regulatory Impact Assessment. The economic analysis supporting this determination utilized the department's most conservative cost estimates that businesses and individuals may experience.

In particular, the changes to the regulation did not affect the estimates of costs for food service facilities. The estimated costs incurred by food service packaging manufacturers increased as a result of the changes, from \$1 million to \$1.4 million annually.

**DETERMINATION THAT THE REGULATIONS DO NOT IMPOSE A MANDATE UPON LOCAL AGENCIES OR SCHOOL DISTRICTS**

The Department has determined that the regulations do not impose a mandate upon local agencies or school districts.

**DUPLICATION OR CONFLICTS WITH CODE OF FEDERAL REGULATIONS -**  
**UPDATED**

Pursuant to Government Code Section 11346.2(b)(6), the department found that there are no federal laws or regulations ~~comparable to~~ addressing the same issues addressed by the proposed regulations. These regulations do not duplicate or conflict with any federal law or regulation.

CalRecycle received stakeholder comments during the public comment periods with regard to potential regulatory duplication of federal regulations. The department's responses to these comments can be found in the matrices in Tabs 11, 14, and 18 of the rulemaking binder. Staff found no federal laws or regulations that addressed the same issues as the proposed regulations, and even if the proposed regulations could be considered to address issues also addressed by federal regulations cited by commenters, they do not duplicate or conflict with those regulations. The proposed regulations establish criteria for food service packaging items to be deemed reusable, recyclable, or compostable by the department for purposes of their approval for use at California food service facilities (as defined by SB 1335). The federal laws and regulations cited by the commenters do not address this issue, nor do they address related issues, such as the effects of packaging materials on food safety and the use of environmental claims in product marketing, in a way that creates duplication or conflict.

**ECONOMIC IMPACT ASSESSMENT – UPDATED**

**CREATION OR ELIMINATION OF JOBS WITHIN CALIFORNIA – Updated**

One Senior Environmental Scientist (Specialist) job was created at the department beginning in Fiscal Year 2019-2020 to develop and implement the regulations. This position will conduct ongoing evaluations of food service packaging and establish and update a List of approved (compliant) food service packaging items. The statute requires the Department of General Services to update its website and ensure that any relevant contract or agreement is updated to conform to these regulations. The Department of General Services did not identify a fiscal impact associated with contracting for reusable, recyclable, or compostable foods service packaging that is above and beyond its existing workload. The regulations require food service facilities to maintain records that are consistent with existing business practices, and to provide information to the

department, upon request. The department determined the nominal work associated with these tasks will be performed by existing employees.

The department does not expect the loss or creation of industry jobs as a direct result of the regulation. However, the department used the Regional Economic Models Inc. (REMI) economic model to estimate the indirect and induced impacts of the regulations to the California economy. The results of the REMI economic model show a slight decrease in the forecasted gross domestic product (GDP) and employment growth due to (1) the increased administrative costs and testing by food service packaging manufacturers, (2) the increased costs of food service packaging being passed on to consumers, and (3) changes in consumer and government spending patterns. As a result of this change in employment growth, we also see a reduction in personal income growth. The decrease in employment and personal income growth is not specific to the impacted industries, but rather is spread out over the entire economy as a result of a decrease in state GDP growth. The initial REMI output estimated that 68 jobs would be eliminated, as an indirect result of the regulation. The assumptions for the REMI model were revised, due to revisions of the regulations, which resulted in an updated estimate of 58 jobs eliminated.

#### **CREATION OF NEW BUSINESSES OR ELIMINATION OF EXISTING BUSINESSES WITHIN CALIFORNIA – Updated**

The regulations impact food service facilities and food service packaging manufacturers. Food service facilities will experience increased costs for the some of the food service packaging items they purchase to serve prepared food. Food service packaging manufacturers will experience decreased demand for products that are not approved as reusable, recyclable, or compostable. Recycling and composting facilities will receive increased quantities of food service packaging for processing.

The number of food service facilities is not expected to change as a result of this regulation because the increased costs incurred by food service facilities will be minimal compared to their total sales. This regulation is expected to increase costs by \$0.02 per food service packaging item and the increased costs will primarily be passed on to customers purchasing meals. Food service facilities will experience increased food service packaging costs if they are currently purchasing less expensive, non-compliant packaging.

The number of food service packaging manufacturers is not expected to change as the regulations impact a small fraction of their customers and product lines. Most food service packaging manufacturers with 100 or more employees make some food service packaging items that the department anticipates will be compliant and some items that are anticipated to be noncompliant. Smaller food service packaging manufacturers may

already be producing food service packaging items that will be considered compliant or may adjust their manufacturing processes, ~~so their~~ to shift to a higher output of products that will comply with the new regulations. Staff evaluated product manufacturer webpages to identify the types of products currently produced. This investigation revealed that most companies manufacture a wide range of food service packaging types that include both compliant and noncompliant materials. For example, Dart manufactures food service packaging items made from polystyrene, PET, paper, sugar cane, and PLA. Pactiv manufactures items made from polypropylene, aluminum, polystyrene, polylactic acid, paper, and molded fiber. Smaller businesses have less diverse product portfolios. For example, Zenith manufactures PET packaging items, and World Centric manufactures paper fiber packaging items. The research results indicate that both large and small manufacturers make compliant packaging and support the finding that no businesses will be eliminated.

#### **EXPANSION OF BUSINESSES CURRENTLY DOING BUSINESS WITHIN THE STATE –**

**No update**

Food service packaging manufacturers are likely to experience increased demand for compliant products. Food service packaging manufacturers produce a portfolio of items, including some that may be deemed compliant and others that will likely be deemed noncompliant. The department does not anticipate any expansion of these companies' operations in California based on the requirements of this regulation.

#### **BENEFITS OF THE REGULATION – Update**

The department has determined that the proposed regulations will result in the following benefits: increased use of reusable food service packaging, more uniform materials sent for recycling and composting, decreased litter, and improved public health. The benefits are described in reports from local governments with polystyrene bans as well as independent research regarding reduced food service packaging use. The benefits include improved water quality, reduced impacts to wildlife, reduced litter cleanup costs, and reduced greenhouse gas emissions. The qualitative benefits and quantitative benefits are presented below.

- Increasing the use of recyclable food service packaging items will result in less food service packaging being littered and more being recycled. Materials that have robust recycling markets are more likely to be put into the waste management and recycling collection and handling system for proper management. By requiring food service facilities to use food service packaging items that are recyclable, the department expects a reduction of litter in California's waterways and on its highways.
  - The department estimates \$300,000 in annual litter cleanup costs may be saved as a result of reducing the amount of non-recyclable polystyrene

food service packaging used at food service facilities. Reports provide some information regarding costs to clean littered items on beaches and roadways. Calculations are based on research indicating that 25% of the polystyrene found on beaches and roadways originates from dining establishments and that the regulation will impact approximately 4% of California's dining establishments.

- Other types of packaging associated with food such as wraps, bags, rigid plastics, and paper items are routinely found in 78% of Southern California streams and are likely to generate litter across the state.
- Materials that can be composted and are accepted at compost facilities are more likely to be diverted from landfills. Diverting food service packaging and the associated food waste to compost facilities will help the department achieve its organic waste diversion goals and reduce greenhouse gas emissions associated with landfilling organic materials.
  - Organic material in landfills produces methane, which is a potent greenhouse gas that is 25 times more harmful than carbon dioxide. Diverting organic material, including food service packaging and the food that it contains, reduces the generation of methane in landfills.
- Reducing toxic chemicals in food service packaging items may reduce exposure to harmful chemicals throughout the food service packaging item's life cycle.
  - Polystyrene food service packaging may not be included on the List of approved Food Service Packaging because if it is not collected and recycled. Polystyrene is made of styrene monomer, which is identified as a carcinogen by several authoritative organizations. These chemicals can put food service packaging manufacturers, staff at food service packaging restaurants, and consumers of food served in polystyrene at risk.
  - The proposed regulation is designed to ensure that recyclable and compostable food service packaging do not contain intentionally added per- and polyfluoroalkyl substances. Various government organizations have efforts underway to better manage these substances because they are widespread in the environment and have a variety of hazard traits.
  - Reducing harmful or potentially harmful chemicals from materials that enter our landfills, compost facilities, and recycling facilities is an important way to reduce the amount of these chemicals entering the environment. It is unknown how much of any specific chemical will be reduced, or how to quantify the impacts of this change, but any reduction will have positive environmental and public health benefits.
- The regulation increases openness and transparency in business and government because it will publicly disclose the manufacturers that supply



food packaging items to California food services facilities, and the materials used in those items.

## **SUMMARY OF STAKEHOLDER COMMENTS AND DEPARTMENT RESPONSES**

Stakeholder comments received during the public comment periods and as part of the public hearing are included with department responses in the matrices in Tabs 11, 15, 16, and 18 of the rulemaking binder and incorporated by reference herein.

Comments raised during the External Scientific Peer Review process are included with department responses in Tab 13 of the rulemaking binder and incorporated by reference herein.

## **DOCUMENTS INCORPORATED BY REFERENCE**

These documents were incorporated by reference because it would be cumbersome, unduly expensive, and impractical to publish them in the California Code of Regulations. The documents are lengthy and would add unnecessary additional volume to the regulation. The documents comprise over 100 standard letter-size pages, which far exceeds the length of the proposed regulations. These standards are formal, technical publications and are reasonably available to the affected public from commonly known, specific sources, including online at [www.astm.org](http://www.astm.org) and [www.iso.org](http://www.iso.org). These documents were noticed in December 12, 2020, as part of the Second 15-Day Public Comment Period.

1. ASTM D5338-15, "Standard Test Method for Determining Aerobic Biodegradation of Plastic Materials Under Controlled Composting Conditions, Incorporating Thermophilic Temperatures," ASTM International, June 2015. Available for purchase from ASTM International. <https://www.astm.org/Standards/D5338.htm>
2. ASTM D6400-19, "Standard Specification for Labeling of Plastics Designed to be Aerobically Composted in Municipal or Industrial Facilities," ASTM International, May 2019. Available for purchase from ASTM International. <https://www.astm.org/Standards/D6400.htm>
3. ASTM D6868-19, "Standard Specification for Labeling of End Items that Incorporate Plastics and Polymers as Coatings or Additives with Paper and Other Substrates Designed to be Aerobically Composted in Municipal or Industrial Facilities," ASTM International, October 2019. Available for purchase from ASTM International. <https://www.astm.org/Standards/D6868.htm>
4. ISO 14855-1:2012, "Determination of the ultimate aerobic biodegradability of plastic materials under controlled composting conditions – Method by analysis of evolved carbon dioxide – Part 1: General method," International Organization for Standardization, December 2012. Available for purchase from ISO. <https://www.iso.org/standard/57902.html>

5. ISO 14855-2:2018, “Determination of the ultimate aerobic biodegradability of plastic materials under controlled composting conditions – Method by analysis of evolved carbon dioxide – Part 2: Gravimetric measurement of carbon dioxide evolved in a laboratory-scale test,” International Organization for Standardization, July 2018. Available for purchase from ISO. <https://www.iso.org/standard/72046.html>
6. ISO/IEC 17025:2017, “General Requirements for the Competence of Testing and Calibration Laboratories,” International Organization for Standardization/International Electrotechnical Commission, November 2017. Available for purchase from ISO. <https://www.iso.org/standard/66912.html>

**FINDING ON NECESSITY OF REPORTS [GOVERNMENT CODE SECTION 11346.3(d)]**

The Act (PRC Sections 42370 – 42370.7) does not mandate reporting requirements.

**TECHNICAL STUDIES, REPORTS, OR DOCUMENTS – [UPDATED]**

1. Title 16, Chapter 1, Subchapter B, Part 260 of the Code of Federal Regulations. *Guides for the Use of Environmental Marketing Claims*. 2020. Accessed January 28, 2020.
2. Association of Plastic Recyclers. *The APR Design Guide for Plastics Recyclability*. 2018. Accessed January 28, 2020.
3. ASTM International. *D6400-19 Standard Specification for Labeling of Plastics Designed to be Aerobically Composted in Municipal or Industrial Facilities*, 2019. Available from ASTM International.
4. Berkeley, City of. *Single Use Foodware and Litter Reduction*. Ordinance No. 7,639-N.S. January 22, 2019. Accessed November 4, 2019.
5. Biodegradable Products Institute, Incorporated. *Position on Fluorinated Chemicals*. 2019. Accessed January 29, 2020.
6. Biomonitoring California. *Potential Designated Chemicals: Perfluoroalkyl and Polyfluoroalkyl Substances (PFASs)*. 2015.
7. California Department of Resources Recycling and Recovery. *2014 Disposal-Facility-Based Characterization of Solid Waste in California*. 2015. Accessed January 28, 2020.
8. California Department of Resources Recycling and Recovery. *SB 1335 Economic and Fiscal Impact Statement (STD. 399) and Appendix for Proposed Regulations*. 2020.
9. California Department of Resources Recycling and Recovery. *State of Disposal and Recycling in California: Calendar year 2018*. 2018.

10. California Department of Resources Recycling and Recovery. *Statewide Waste Characterization Study*. 2008. Accessed January 28, 2020.
11. Californians Against Waste. *Polystyrene: Local Ordinances*. 2019. Accessed September 8, 2019.
12. Center for Environmental Health. *Avoiding hidden hazards: A purchaser's guide to safer foodware*. 2018. Accessed January 28, 2020.
13. Choi, Youn Jeong; Lazcano, Rooney Kim; Yousefi, Peyman; Trim, Heather; Lee, Linda S. *Perfluoroalkyl Acid Characterization in U.S. Municipal Organic Solid Waste Composts*. *Environmental Science & Technology Letters* 6 (6), 372-377. 2019. DOI: 10.1021/acs.estlett.9b00280
14. Compost Manufacturing Alliance. *Profile Submission Form – Compostable Products*. 2019. Accessed January 29, 2020.
15. Department of Toxic Substances Control. *Product – Chemical Profile for Perfluoroalkyl and Polyfluoroalkyl Substances (PFASs) in Carpets and Rugs*. 2018. Accessed January 28, 2020
16. Department of Toxic Substances Control. *Rulemaking package for Perfluoroalkyl and Polyfluoroalkyl Substances (PFASs) In Carpets and Rugs*. 2020. Accessed February 28, 2020.
17. European Committee for Standardization. *DIN EN 12875-1 Mechanical dishwashing resistance of utensils, Part 1: Reference test method for domestic articles*, 2005. Available from ANSI.
18. Food and Drug Administration. *Inventory of Effective Food Contact Substance (FCS) Notifications. 2020*. Accessed February 6, 2020.
19. National Institute for Public Health and the Environment. *Per- and polyfluoroalkyl substances (PFASs) in food contact material*. 2019. Accessed February 2, 2020.
20. National Oceanic and Atmospheric Administration Marine Debris Program. *ReThink Disposable: Preventing Marine Debris at the Source*. 2020. Accessed February 5, 2020.
21. Natural Resources Defense Council. *America's Dairyland May Have a PFAS Problem*. 2019. Accessed January 28, 2020.
22. Personal communication. Maureen Kinyua, University of California, Davis. 2019.
23. Safer Chemicals Healthy Families, Toxic-Free Future. *Take Out Toxics: PFAS Chemicals in Food Packaging*. 2018. Accessed January 28, 2020.
24. San Francisco Department of the Environment. *Plastic, Litter, and Toxics Reduction Law (Purchasing & Usage Guidelines)*. 2019. Accessed November 18, 2019.

25. San Francisco, City and County of. *Environment Code- Single-Use Food Ware Plastics, Toxics, and Litter Reduction*. City of San Francisco Ordinance No. 294-18. 2018. Accessed November 4, 2019.
26. Schaider, Laurel A.; Balan, Simona A.; Blum, Arlene; Andrews, David Q.; Strynar, Mark J.; Dickinson, Margaret E.; Lunderberg, David M.; Lang, Johnsie R; Peaslee, Graham F. *Fluorinated compounds in U.S. fast food packaging*. *Environmental Science & Technology Letters* 4, 105–111. 2017. Accessed January 28, 2020
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28. Trier, Xenia; Taxvig, Camilla; Rosenmai, Anna Kjerstine; Pedersen, Gitte Alsing. *PFAS in paper and board for food contact - options for risk management of poly- and perfluorinated substances*. Copenhagen K, Denmark: Nordic Council of Ministers. TemaNord, No. 573. 2017. Accessed January 28, 2020.

Additional technical documents relied upon were noticed on October 13, 2020, and December 12, 2020, as part of separate 15-Day Public Comment Periods.

1. ASTM International. *D5338-15 Standard Test Method for Determining Aerobic Biodegradation of Plastic Material Under Controlled Composting Conditions, Incorporating Thermophilic Temperatures*, 2015. Available from ASTM International.
2. ASTM International. *D6868-19 Standard Specification for Labeling of End Items that Incorporate Plastics and Polymers as Coatings or Additives with Paper and Other Substrates Designed to be Aerobically Composted in Municipal or Industrial Facilities*. 2019.
3. Biodegradable Products Institute, Incorporated. *BPI Approved Labs*. 2020. Accessed October 7, 2020.
4. Biodegradable Products Institute, Incorporated. *BPI Certification Scheme*. 2019. Accessed October 7, 2020.
5. International Organization for Standardization. *ISO 14855-1:2012 Determination of the ultimate aerobic biodegradability of plastic materials under controlled composting conditions – Method by analysis of evolved carbon dioxide – Part 1: General method*. 2012.
6. International Organization for Standardization. *ISO 14855-2:2018 Determination of the ultimate aerobic biodegradability of plastic materials under controlled composting conditions – Method by analysis of evolved carbon dioxide – Part 2: Gravimetric measurement of carbon dioxide evolved in a laboratory-scale test*. 2018.

7. International Organization for Standardization/International Electrotechnical Commission. *ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories*. 2017.
8. Narancic, Tanja; Verstichel, Steven; Chaganti, Srinivasa Reddy; Morales-Gamez, Laura; Kenny, Shane T.; De Wilde, Bruno; Padamati, Ramesh Babu; O'Connor, Kevin E. *Biodegradable Plastic Blends Create New Possibilities for End-of-Life Management of Plastics but They Are Not a Panacea for Plastic Pollution*. *Environmental Science & Technology* 2018 52 (18), 10441-10452. DOI: 10.1021/acs.est.8b02963
9. University of Wisconsin, Stevens Point. *Compostability Testing*. 2020. Accessed October 7, 2020.