

**ECONOMIC AND FISCAL IMPACT STATEMENT
(REGULATIONS AND ORDERS)**

STD. 399 (Rev. 10/2019)

ECONOMIC IMPACT STATEMENT

DEPARTMENT NAME CalRecycle	CONTACT PERSON Nicole Clay	EMAIL ADDRESS nicole.clay@calrecycle.ca.gov	TELEPHONE NUMBER (916) 341-6174
DESCRIPTIVE TITLE FROM NOTICE REGISTER OR FORM 400 Sustainable Packaging for the State of California Act of 2018			NOTICE FILE NUMBER Z 2020-0303-05

A. ESTIMATED PRIVATE SECTOR COST IMPACTS *Include calculations and assumptions in the rulemaking record.*

1. Check the appropriate box(es) below to indicate whether this regulation:

- | | |
|--|---|
| <input checked="" type="checkbox"/> a. Impacts business and/or employees | <input type="checkbox"/> e. Imposes reporting requirements |
| <input checked="" type="checkbox"/> b. Impacts small businesses | <input type="checkbox"/> f. Imposes prescriptive instead of performance |
| <input checked="" type="checkbox"/> c. Impacts jobs or occupations | <input checked="" type="checkbox"/> g. Impacts individuals |
| <input type="checkbox"/> d. Impacts California competitiveness | <input type="checkbox"/> h. None of the above (Explain below): |

*If any box in Items 1 a through g is checked, complete this Economic Impact Statement.**If box in Item 1.h. is checked, complete the Fiscal Impact Statement as appropriate.***CalRecycle**2. The CalRecycle estimates that the economic impact of this regulation (which includes the fiscal impact) is:
(Agency/Department)

- Below \$10 million
- Between \$10 and \$25 million
- Between \$25 and \$50 million
- Over \$50 million *[If the economic impact is over \$50 million, agencies are required to submit a [Standardized Regulatory Impact Assessment](#) as specified in Government Code Section 11346.3(c)]*

3. Enter the total number of businesses impacted: 4,450Describe the types of businesses (Include nonprofits): Primarily food service facilities. Refer to attached Appendix, Part A.3.Enter the number or percentage of total businesses impacted that are small businesses: 97%4. Enter the number of businesses that will be created: none eliminated: noneExplain: Refer to attached Appendix, Part A.4.5. Indicate the geographic extent of impacts: Statewide
 Local or regional (List areas): _____6. Enter the number of jobs created: 1 and eliminated: 58 (indirect)Describe the types of jobs or occupations impacted: 1 state government job added and approximately 58 jobs eliminated indirectly throughout the economy as a result of the regulation. Please see attached Appendix, Part A.6.7. Will the regulation affect the ability of California businesses to compete with other states by making it more costly to produce goods or services here? YES NOIf YES, explain briefly: _____

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ECONOMIC IMPACT STATEMENT (CONTINUED)**B. ESTIMATED COSTS** *Include calculations and assumptions in the rulemaking record.*

1. What are the total statewide dollar costs that businesses and individuals may incur to comply with this regulation over its lifetime? \$ 7.0 million
- a. Initial costs for a small business: \$ 100 Annual ongoing costs: \$ 600 Years: Ongoing
- b. Initial costs for a typical business: \$ 100 Annual ongoing costs: \$ 1,050 Years: Ongoing
- c. Initial costs for an individual: \$ 0 Annual ongoing costs: \$ 1.50 Years: Ongoing
- d. Describe other economic costs that may occur: Refer to attached Appendix, Part B.1.(d)
2. If multiple industries are impacted, enter the share of total costs for each industry: Food service facilities, \$5.6 million annually.
Food service packaging manufacturers, \$1.4 million annually. Refer to attached Appendix, Part B.2.
3. If the regulation imposes reporting requirements, enter the annual costs a typical business may incur to comply with these requirements. Include the dollar costs to do programming, record keeping, reporting, and other paperwork, whether or not the paperwork must be submitted. \$ See Appendix.
4. Will this regulation directly impact housing costs? YES NO
If YES, enter the annual dollar cost per housing unit: \$ _____
Number of units: _____
5. Are there comparable Federal regulations? YES NO
Explain the need for State regulation given the existence or absence of Federal regulations: No Federal regulations are comparable to the proposed regulation for the Department to implement Senate Bill (SB) 1335 (Allen, Chapter 610, Statutes of 2018)
Enter any additional costs to businesses and/or individuals that may be due to State - Federal differences: \$ N/A

C. ESTIMATED BENEFITS *Estimation of the dollar value of benefits is not specifically required by rulemaking law, but encouraged.*

1. Briefly summarize the benefits of the regulation, which may include among others, the health and welfare of California residents, worker safety and the State's environment: The benefits include improved air quality, reduced impacts to wildlife, reduced litter cleanup costs, public health, and reduced greenhouse gas emissions. Refer to attached Appendix, Part C.1.
2. Are the benefits the result of: specific statutory requirements, or goals developed by the agency based on broad statutory authority?
Explain: The Department is developing regulations required by Senate Bill (SB) 1335 (Allen, Chapter 610, Statutes of 2018)
3. What are the total statewide benefits from this regulation over its lifetime? \$ See Appendix, Part C.3.
4. Briefly describe any expansion of businesses currently doing business within the State of California that would result from this regulation: No expansion of businesses expected. Refer to attached Appendix, Part C.4.

D. ALTERNATIVES TO THE REGULATION *Include calculations and assumptions in the rulemaking record. Estimation of the dollar value of benefits is not specifically required by rulemaking law, but encouraged.*

1. List alternatives considered and describe them below. If no alternatives were considered, explain why not: 1 - Reduce recycling program requirement and increase degradation time requirement. 2 - Establish five regional lists and require additional record keeping by food service facilities. Refer to attached Appendix, Part D.1.

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ECONOMIC IMPACT STATEMENT (CONTINUED)

2. Summarize the total statewide costs and benefits from this regulation and each alternative considered:

Regulation: Benefit: \$ N/A Cost: \$ 7.2 million
 Alternative 1: Benefit: \$ N/A Cost: \$ 6.6 million
 Alternative 2: Benefit: \$ N/A Cost: \$ 11.4 million

3. Briefly discuss any quantification issues that are relevant to a comparison of estimated costs and benefits for this regulation or alternatives: There are no quantification issues with comparing costs of the regulation with the alternatives. Benefits cannot be quantified for the regulation or the alternatives.

4. Rulemaking law requires agencies to consider performance standards as an alternative, if a regulation mandates the use of specific technologies or equipment, or prescribes specific actions or procedures. Were performance standards considered to lower compliance costs? YES NO

Explain: Not applicable as neither the authorizing statute nor the regulation mandates the use of specific technologies or equipment. Performance standards are used in implementing this program.

E. MAJOR REGULATIONS *Include calculations and assumptions in the rulemaking record.*

California Environmental Protection Agency (Cal/EPA) boards, offices and departments are required to submit the following (per Health and Safety Code section 57005). Otherwise, skip to E4.

1. Will the estimated costs of this regulation to California business enterprises **exceed \$10 million**? YES NO

***If YES, complete E2. and E3
If NO, skip to E4***

2. Briefly describe each alternative, or combination of alternatives, for which a cost-effectiveness analysis was performed:

Alternative 1: _____

Alternative 2: _____

(Attach additional pages for other alternatives)

3. For the regulation, and each alternative just described, enter the estimated total cost and overall cost-effectiveness ratio:

Regulation: Total Cost \$ _____ Cost-effectiveness ratio: \$ _____

Alternative 1: Total Cost \$ _____ Cost-effectiveness ratio: \$ _____

Alternative 2: Total Cost \$ _____ Cost-effectiveness ratio: \$ _____

4. Will the regulation subject to OAL review have an estimated economic impact to business enterprises and individuals located in or doing business in California exceeding \$50 million in any 12-month period between the date the major regulation is estimated to be filed with the Secretary of State through 12 months after the major regulation is estimated to be fully implemented?

YES NO

If YES, agencies are required to submit a [Standardized Regulatory Impact Assessment \(SRIA\)](#) as specified in Government Code Section 11346.3(c) and to include the SRIA in the Initial Statement of Reasons.

5. Briefly describe the following:

The increase or decrease of investment in the State: No change is expected due to this regulation.

The incentive for innovation in products, materials or processes: No change is expected due to this regulation.

The benefits of the regulations, including, but not limited to, benefits to the health, safety, and welfare of California residents, worker safety, and the state's environment and quality of life, among any other benefits identified by the agency: The benefits include improved water quality, reduced impacts to wildlife, reduced litter, improved public health. See Appendix, Part E.5.

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FISCAL IMPACT STATEMENT

A. FISCAL EFFECT ON LOCAL GOVERNMENT *Indicate appropriate boxes 1 through 6 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.*

1. Additional expenditures in the current State Fiscal Year which are reimbursable by the State. (Approximate)
(Pursuant to Section 6 of Article XIII B of the California Constitution and Sections 17500 et seq. of the Government Code).

\$ _____

a. Funding provided in _____

Budget Act of _____ or Chapter _____, Statutes of _____

b. Funding will be requested in the Governor's Budget Act of _____

Fiscal Year: _____

2. Additional expenditures in the current State Fiscal Year which are NOT reimbursable by the State. (Approximate)
(Pursuant to Section 6 of Article XIII B of the California Constitution and Sections 17500 et seq. of the Government Code).

\$ _____

Check reason(s) this regulation is not reimbursable and provide the appropriate information:

a. Implements the Federal mandate contained in _____

b. Implements the court mandate set forth by the _____ Court.

Case of: _____ vs. _____

c. Implements a mandate of the people of this State expressed in their approval of Proposition No. _____

Date of Election: _____

d. Issued only in response to a specific request from affected local entity(s).

Local entity(s) affected: _____

e. Will be fully financed from the fees, revenue, etc. from: _____

Authorized by Section: _____ of the _____ Code;

f. Provides for savings to each affected unit of local government which will, at a minimum, offset any additional costs to each;

g. Creates, eliminates, or changes the penalty for a new crime or infraction contained in _____

3. Annual Savings. (approximate)

\$ _____

4. No additional costs or savings. This regulation makes only technical, non-substantive or clarifying changes to current law regulations.

5. No fiscal impact exists. This regulation does not affect any local entity or program.

6. Other. Explain _____

**ECONOMIC AND FISCAL IMPACT STATEMENT
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FISCAL IMPACT STATEMENT (CONTINUED)**B. FISCAL EFFECT ON STATE GOVERNMENT** *Indicate appropriate boxes 1 through 4 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.* 1. Additional expenditures in the current State Fiscal Year. (Approximate)

\$ _____

It is anticipated that State agencies will: a. Absorb these additional costs within their existing budgets and resources. b. Increase the currently authorized budget level for the _____ Fiscal Year 2. Savings in the current State Fiscal Year. (Approximate)

\$ _____

 3. No fiscal impact exists. This regulation does not affect any State agency or program. 4. Other. Explain **\$152,000/year in ongoing costs for one CalRecycle staff approved via FY 19/20 budget change proposal.****DGS is anticipated to incur costs of \$38,000/year. Refer to attached Appendix, Fiscal Impacts, Part B****C. FISCAL EFFECT ON FEDERAL FUNDING OF STATE PROGRAMS** *Indicate appropriate boxes 1 through 4 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.* 1. Additional expenditures in the current State Fiscal Year. (Approximate)

\$ _____

 2. Savings in the current State Fiscal Year. (Approximate)

\$ _____

 3. No fiscal impact exists. This regulation does not affect any federally funded State agency or program. 4. Other. Explain _____

FISCAL OFFICER SIGNATURE

DATE

*The signature attests that the agency has completed the STD. 399 according to the instructions in SAM sections 6601-6616, and understands the impacts of the proposed rulemaking. State boards, offices, or departments not under an Agency Secretary must have the form signed by the highest ranking official in the organization.*

AGENCY SECRETARY

DATE

*Finance approval and signature is required when SAM sections 6601-6616 require completion of Fiscal Impact Statement in the STD. 399.*

DEPARTMENT OF FINANCE PROGRAM BUDGET MANAGER

DATE



STD. 399, ECONOMIC AND FISCAL IMPACT STATEMENT

Regulation implementing the Sustainable Packaging for the State of California Act of 2018 SB 1335

Part A. ESTIMATED PRIVATE SECTOR COST IMPACTS

Part A.3. Total number and types of businesses impacted

CalRecycle estimates that approximately 4,450 businesses will be impacted by the new regulatory requirements. Approximately 4,430 of those impacted businesses are food service facilities, which include restaurants, cafeterias, food trucks, food carts, and other food vendors located on state property, serving state agencies, or contracted by state agencies. Approximately 20 businesses are food service packaging manufacturers.

CalRecycle identified 16 food service facility categories (such as universities, prisons, and state parks), each of which have several sites or specific locations (such as a university campus). CalRecycle compiled information on the number of food service facilities and types of dining establishments from published websites and personal interviews. Many food service facility categories have several types of on-site food service facilities (e.g. dining hall, food court, restaurant), which are broken out into food service facility subcategories. Data collected on these subcategories were extrapolated to sites or locations within the category when data was otherwise not available.

CalRecycle estimates that 97%¹ of the 4,430 food service facilities are small businesses with fewer than 100 employees.² The remaining 3% of impacted food service facilities are institutional food service operations at prisons, hospitals, universities, and military facilities with more than 100 employees. The California Department of Rehabilitation Business Enterprise Program constitutes approximately 50 of the impacted food service facilities. The federal and state statutes governing the Department of Rehabilitation Business Enterprise Program provide a "priority" for blind vendors to operate food service facilities in federal and state government buildings.

CalRecycle estimates fewer than 20 food service packaging manufacturers will be impacted by these regulations. This estimate is based on the number of food service packaging manufacturers identified in data provided by the Department of General Services (DGS)^{3,4} and Sysco. CalRecycle staff conducted research and determined that approximately 25% of the impacted food service packaging manufacturers are small businesses with fewer than 100

employees. Business employment data was obtained from information published in corporate reports and on the business's website. Third-party sites such as zoominfo.com and owler.com were used when information was not available directly from the business.⁵

Recycling and composting businesses are unlikely to be impacted by this regulation due to the minimal amount of additional material that will be recycled or composted. An additional 0.1% to 1.0% increase in the total amount of material processed at compost and recycling facilities will occur as a result of the regulations. A CalRecycle study found sufficient excess capacity at California compost facilities for the small amount of additional compostable material expected to be generated as a result of this regulation.⁶ A study related to commercial recycling⁷ and another related to statewide recycling infrastructure⁸ show more than 20 million tons of available capacity at California sorting facilities and more than 30,000 tons of excess capacity at plastic reclaimers. This excess compost and recycling capacity is sufficient to accommodate the additional material that will be diverted from landfill disposal as a result of this regulation. Additionally, the state's recycling and composting infrastructure is already expanding as a result of SB 1383 (Lara, Chapter 395, Statutes of 2016), AB 341 (Chesbro, Chapter 476, Statutes of 2011), and AB 1826 (Chesbro, Chapter 727, Statutes of 2014), which require significant reductions in landfilling of materials.

Part A.4. Number of businesses created or eliminated

As noted above, the regulations impact food service facilities and food service packaging manufacturers. Food service facilities will experience 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. 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 item (see section B.1), 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 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.

Part A.5. Geographic extent of impacts

This regulation impacts food service facilities throughout the state. At least 18 food service manufacturing facilities are in California.

Part A.6. Number of jobs created or eliminated

One Senior Environmental Scientist (Specialist) job was created at CalRecycle beginning in Fiscal Year 2019-2020⁹ 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 DGS to update its website and ensure that any relevant contract or agreement is updated to conform to these regulations. DGS did not identify a fiscal impact associated with contracting for reusable, recyclable, or compostable food service packaging that is above and beyond its existing workload.¹⁰ The regulations require food service facilities to maintain records that are consistent with existing business practices, and to provide information to CalRecycle, upon request. CalRecycle determined the nominal work associated with these tasks will be performed by existing employees.

CalRecycle does not expect the loss or creation of industry jobs as a direct result of the regulation. In 2019, California's total state gross domestic product was \$3.1 trillion¹¹. CalRecycle used the REMI economic model to estimate the indirect and induced impacts of the regulations to the California economy (Table 1). The results of the REMI economic model show a slight decrease in the forecasted 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.

Table 1: REMI Model Economic Output

Output Year	2025	2026	2027
Decreased State GDP	\$3.8 M	\$3.7 M	\$4.0 M
Total Net Employment Decrease	56 jobs	58 jobs	58 jobs
Total Personal Income Decrease	\$5.2 M	\$5.4 M	\$5.8 M

Part B. ESTIMATED COSTS

Part B.1.(a) and (b): Estimated costs for businesses

The regulations will have measurable impacts on two industries: food service facilities and food service packaging manufacturers. Food service facilities will incur costs to comply with this regulation because compliant food service packaging items are often more expensive than the noncompliant items and because of minor recordkeeping requirements imposed by the regulations. Food service packaging manufacturers will also be financially impacted. The full details of these costs are described in section B.1.(d), below.

Both typical and small business food service facilities are expected to incur \$100 in initial compliance costs to review the department's list of approved food service packaging items and identify compliant products available for their purchase. This estimate is based on CalRecycle staff's efforts to review various lists of food service packaging items.^{3, 4, 12, 13} This review included identifying the food service packaging types needed by a typical food service facility and reviewing product manufacturer webpages to determine which products would meet its needs. This information was then compared with the criteria in the proposed regulations and lists of available food service packaging. CalRecycle staff spent approximately four hours evaluating the food service packaging items that would be used by a full-service restaurant. The initial compliance costs are based off a wage rate of \$25 per hour, which is based on the average wage for a Staff Services Analyst working for the State of California.¹⁴ This increased labor cost is applicable to both small and large businesses.

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. To avoid underestimating costs, this analysis does not consider the potential cost-savings that food service facilities would achieve by purchasing a lower-priced food service packaging item than currently used, by switching to reusable packaging items, or by implementing a take-back program. CalRecycle determined that reusable food service packaging items are the lowest-cost option when amortized over the first year of use. Initial costs would include the purchase of reusable food service packaging items, bus tubs, racks, and dishwashers (Rethink Disposable n.d.). Costs to business and overall meals served are currently less than the estimates included in this analysis due to shelter-in-place restrictions in response to COVID-19. However, the economic analysis cost estimates are based on a return to normal or pre-COVID-19 status. If teleworking continues at an increased rate, the costs incurred by businesses from purchasing compliant items will be less than what is calculated in this Economic and Fiscal Impact Statement.

The data sources and assumptions used to calculate the cost estimates are described below. The costs were calculated using the total number of food service packaging items in meals served by food service facilities (see #1 and #2 below), subtracting the number of food service packaging items currently used that are compliant (see #3 below), multiplying the resultant number of packaging items that are noncompliant by the increased cost per food service packaging item (see # 4 below), and then dividing by the total number of food service facilities (see #5 below).

1. **Number of consumers and meals per consumer per year.** CalRecycle obtained data on the number of consumers in each category of food service facilities (such as universities, prisons, and state parks) from several sources, including the California State Budget for Fiscal Year 2019-2020, CalRecycle's State Agency Waste Management Annual Reports, university and state agency webpages, and personal interviews. The types of food service facilities covered by this regulation are highly variable in the types of meals provided; therefore, staff created subcategories of food service facilities to increase the level of specificity. For example, university campus facilities were broken into five subcategories: residential students, nonresidential students, staff/faculty, visitors, and sports attendees.
2. **Number of food service packaging items per meal.** Data was not available regarding specific numbers or types of food service packaging items used at most food service facilities. CalRecycle created meal scenarios to estimate the average number of food service packaging items used at each facility category or subcategory based on the typical meals served at those facilities.

CalRecycle staff spoke with university representatives and Department of Rehabilitation vendors and personally visited food service facilities to determine the most appropriate number of food service packaging items per meal at each facility. Staff then applied the estimated number of food service packaging items per meal to each subcategory. CalRecycle obtained from Corrections more specific data regarding food service packaging items used for prisons. Prisons use reusable items for breakfast and dinner meals and use single-use items for lunches.¹⁵ CalRecycle used the specific number and type of food service packaging items used for prison lunches for its analysis of prison food service packaging use.

This resulted in the following meal scenarios: (1) full meals served at food service facilities such as hospitals, university residential dining halls, and military facilities (containing three food service packaging items each); (2) semi-casual meals served at food service facilities such as cafeterias and fast-food restaurants (containing two food service packaging items each); (3) casual meals served at food service facilities such as fairs and sporting events (containing one food service packaging item each); and (4) prison lunches (containing four specific packaging items).

3. **Number of meals currently served on compliant food service packaging.** Some food service facilities currently serve prepared food on food service packaging items that will be compliant under the new regulation. Food service facilities that currently use reusable, recyclable, or compostable food service packaging items will not experience increased costs as they will not need to alter their purchasing choices. CalRecycle used its expertise in solid waste, recycling, and composting to identify material types that would most likely be approved as recyclable or compostable under the proposed regulation.

CalRecycle conducted personal interviews to identify which food service facility categories and subcategories currently serve meals on reusable food service packaging. For example, institutional facilities such as university residential dining halls,¹⁶ prisons and hospitals,¹⁷ military bases, and wildfire camps utilize reusable food

service packaging and will not experience a change in costs as a result of this regulation.

To ensure a conservative estimate, CalRecycle estimated the economic impacts of the regulation assuming that food service facilities that are currently using single-use items will not switch to reusable food service packaging items. However, reusable food service packaging items have lower costs when amortized over the first year of use, even when including auxiliary items such as bus tubs, racks, and dishwashers.¹⁸ Nonetheless, a small number of food service facilities may re-evaluate their food service packaging choices and switch to reusable items in response to the new regulatory requirements.

Some food service facilities are already using compliant single-use items due to local ordinances that ban certain kinds of noncompliant packaging or materials. Additionally, California State University¹⁹ is working to eliminate polystyrene food service packaging by 2021, and campuses have begun replacing these products with compliant food service packaging.

4. **Cost differential between compliant and noncompliant food service packaging items.** CalRecycle acquired food service packaging costs from a variety of sources^{11,12} and categorized the items as compliant or noncompliant. The average cost of all food service packaging items currently available was subtracted from the average cost of compliant food service packaging items. This resulted in an average increased cost of \$0.02 between compliant and noncompliant food service packaging items.

The average cost of currently available food service packaging items was refined to account for local polystyrene (PS) bans because at least 120 California cities and counties²⁰ have ordinances that prohibit the use of PS. This impacts the economic analysis because PS is one of the cheapest materials available for use in food service packaging. CalRecycle accounted for these impacts by creating two cost differentials: one for use in jurisdictions that have a PS ban and another for use in jurisdictions without a PS ban. The appropriate cost differential was applied to food service facilities based on where they operate, if locations were available (such as for university campuses). CalRecycle applied a statewide average percentage of jurisdictions with PS bans to the food service facilities whose jurisdiction or location was unclear (such as concession stands at state parks). This resulted in the PS ban cost differential being applied to 29% of the food service facilities that do not have specific locations identified.

CalRecycle acknowledges there may be some instances when noncompliant food service packaging items will be of equal or greater cost than those that are compliant. For example, average polylactic acid (PLA) food service packaging products are \$0.04 more expensive per item than paperboard products. Following the adoption of the regulation, many PLA products are unlikely to meet the compostable food service packaging requirements due to the amount of time it takes for those materials to biodegrade. However, the lower-priced paperboard products will likely meet the regulatory requirements and may be purchased in place of the some higher-priced PLA food packaging items. Staff took a conservative approach to the economic analysis and

assumed that compliant food service packaging will always cost more than noncompliant food service packaging.

5. **Total number of food service facilities.** This number was calculated using a combination of published information (such as the number of courthouses,²¹ number of university campuses, and number of prisons), assumptions based on personal experience and personal interviews (such as the number of vendors at fairs), and extrapolation of limited data sets (such as the number of independent food vendors at university campuses, the number of state buildings with cafeterias, and the number of food service facilities at state parks). Data availability for food service facilities located on state-owned property was limited.²² CalRecycle added 500 facilities to the total number of food service facility on state-owned property to account for that data gap, and another 400 facilities to account for inaccurate estimates in other categories to ensure the cost estimates are conservative.

Part B.1. (c): Estimated costs for individuals

Food service facilities that sell meals may pass these increased costs on to their customers. Individuals who are given (not sold) meals at prisons, hospitals, military facilities, etc. will not experience a cost difference because they do not purchase these meals. The average consumer who purchases meals at food service facilities will experience an annual increase of \$1.50. If teleworking in response to COVID-19 continues at an increased rate, the cost estimates for individuals will be less. However, this analysis is based on a return to pre-COVID-19 purchasing patterns in 2021. The estimated costs for individuals is based on the following factors:

1. the cost of food service packaging items (see section B.1. (a) and (b) above)
2. the average number of food service packaging items per purchased meal (1.2 packaging items), which is weighted based on the number of casual, semi-casual, and full meals purchased (see section B.1.(a) and (b) bullet 2 for descriptions of these meals)
3. the average number of purchased meals per consumer per year (63 purchased meals; calculated by dividing the total number of meals served by the total number of individuals served)
4. the average food service facility compliance cost

CalRecycle anticipates that food service packaging manufacturers will pass their increased compliance costs on to all of their customers, not just food service facilities. Food service facilities represent a small fraction (4%) of the California dining establishments,¹ and an even smaller fraction (0.4%) of U.S. dining establishments.²³

Part B.1. (d): Other economic costs: estimated costs for food service packaging manufacturers

Food service packaging manufacturers that seek approval of their food service packaging as reusable, recyclable, or compostable will incur costs to provide CalRecycle with documentation regarding product testing and other required information to demonstrate compliance. The manufacturers' costs will vary depending on the number of food service packaging items the

manufacturer submits for evaluation and the category (reusable, recyclable, or compostable) for which the item is being evaluated. Average food service packaging manufacturers are expected to incur initial costs of \$68,300 (see #1 below), and ongoing annual costs of \$3,225 (see #2 below). Some manufacturers may choose to submit their food service packaging items in groups, which would result in cost-savings. However, this analysis assumes that packaging manufacturers submit individual applications resulting in a conservative economic cost estimate.

The methodology, data sources, and assumptions used to calculate the cost estimates for each of the major cost categories is described below:

1. **Initial Costs.** Food service packaging manufacturers will submit applications that include product testing results (for certain chemical ingredients, product performance, etc.) to CalRecycle for evaluation. Testing costs for food service packaging manufacturers were estimated from several sources, including personal interviews,²⁴ previous CalRecycle contracts,²⁵ and staff estimates. CalRecycle used hourly wages for comparable state employee classifications multiplied by the number of expected hours to gather and submit manufacturer information.
2. **Ongoing Annual Costs.** Food service packaging manufacturers that have an approved food service packaging item will incur ongoing costs to ensure food service packaging items remain compliant with the requirements of this regulation. Food service packaging manufacturers will be required to update their application if they make a non-aesthetic change, or if the department notifies them that a chemical may be used in food service packaging and requires updated information to demonstrate compliance with subsections 17989.2(a)(1), (2), or (4). CalRecycle estimates that 20% of the 500 food service packaging items are expected to need a revised application as a result of these requirements, requiring three hours of staff time and 1 hour of management time. Additionally, three hours of staff time and 1 hour of management time will be required to ensure ongoing compliance with the regulation. The ongoing costs also estimate 50 new applications for food service packaging items submitted annually, which will require four hours of staff time and one hour of management time. The combined costs result in an average annual cost of \$3,225 for each packaging manufacturer.

Part B.2. Multiple industry impacts

Two industries will be impacted by this regulation: food service facilities and food service packaging manufacturers. These two industries are expected to incur a combined total of \$7.0 million annually in increased compliance costs. Food service facilities are expected to incur costs of approximately \$5.6 million annually. Food service packaging manufacturers are expected to incur costs of approximately \$1.4 million annually. In addition to these impacts to businesses, there are an additional estimated \$0.2 million in impacts to state agencies (as indicated by the \$7.2 million total impacts listed in section D.2 of the Form 399).

Part B.3. Annual typical administrative business costs (including record keeping)

CalRecycle estimates that a typical food service facility will collectively incur a maximum of \$320 in annual costs to comply with record keeping requirements. All food service facilities will

be required to maintain records associated with food service packaging purchases; however, only a small number will be required to report that information to the department in any given year. CalRecycle estimates that food service facilities will spend eight hours of staff time per year at \$25 per hour (\$200) for recordkeeping, and four hours of staff time at \$25 per hour and 0.5 hours of management review time at \$40 per hour (\$120) for providing records to CalRecycle upon request. All food service facilities (approximately 4,450) will be required to maintain records each year at a combined cost of approximately \$0.9 million. An estimate of 20% of food service facilities will be asked to provide records each year and be required to submit records to CalRecycle at a combined cost of approximately \$0.1 million.

Part C. ESTIMATED BENEFITS

Parts C.1 and C.3. Total statewide benefits

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 bans²⁶ as well as independent research²⁷ 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 \$0.3 million 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.²⁸ 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 streams²⁹ 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 CalRecycle 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.³⁰

- 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.^{31 32} These chemicals can put food service packaging manufacturers, staff at food service packaging restaurants, and consumers of food served in polystyrene at risk.³³
 - 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.^{34, 35, 36}
 - 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.

Part C.4. Expansion of businesses in California

Food service packaging manufacturers are likely to experience increased demand for compliant products. As noted in section A.4, food service packaging manufacturers produce a portfolio of items, including some that may be deemed compliant and others that will likely be deemed noncompliant. CalRecycle does not anticipate any expansion of businesses in California based on the requirements of this regulation.

Part D. ALTERNATIVES TO THE REGULATION

Part D.1. List alternatives considered and describe them below.

Alternative 1:

- Alternative 1 considered two changes to the proposed regulations: 1) reducing the criteria for collection of recyclable and compostable food service packaging from 75% (effective 2026) to a flat rate of 60%, and 2) reducing the criterion for compostable food service packaging by removing the requirement that the item spend no more than 60 days in the composting process. Rather, the degradation of the item would align with the ASTM D6400 standard, which allows the item to degrade in 84 to 180 days.

These changes would alter the List of compliant food service packaging items, which would in turn impact the cost differential between compliant and noncompliant food service packaging items. These changes would result in a decreased cost differential per food service packaging item from \$0.02 to \$0.018 (a reduction of \$0.002 per item). This alternative also would reduce

the annual impacts to the economy from approximately \$7.2 million to approximately \$6.6 million.

Alternative 1 was not selected as it would not significantly improve the standards by which materials are considered recyclable or compostable compared to current practices but would still impose significant annual costs on regulated businesses of more than \$6 million. These reduced standards would allow materials to be listed as recyclable or compostable when they have limited or nonexistent markets. Identifying materials as being recyclable or compostable when they are not actually recovered results in consumer confusion and material being littered and sent to landfills rather than being recycled or composted. These regulations are intended to help clarify the performance standards, and collection and processing requirements to ensure products are recycled and composted. For example, 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. 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 which would potentially contaminate agricultural land and food crops. To prevent this contamination, Alternative 1 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.

Alternative 2:

Alternative 2 considered two changes to the proposed regulations: 1) establish five regional Lists rather than a single statewide List and 2) require additional recordkeeping by food service facilities. This alternative was considered to allow for regional variability in collection, recycling, and composting infrastructure. Regional Lists could prevent disruptions to small, local programs and allow the continued use of certain materials in areas that have the infrastructure to collect and recycle or compost it.

Establishing five regional Lists would require:

1. Identifying five regions which based on waste characterization studies ³⁷ would include the following: Bay Area, Coastal, Mountain, Southern, and Central Valley.
2. Developing and maintaining five Lists of approved food service packaging and ensuring that DGS has the necessary information to have contracts that include food packaging on each regional List.
 - Food service packaging manufacturers packaging items would be required to provide the region-specific information in their application for each regional List they would like to be on.
 - CalRecycle would need to reallocate staff resources to conduct the staff work associated with additional data gathering and management efforts needed to establish and maintain five regional Lists.

These changes would result in food service packaging manufacturers being required to collect new regional data and submit applications for their products for each of the five regions, increasing data acquisition and administrative costs significantly (by approximately \$3.8 million). Food service facilities would also face increased record keeping and administrative/data access costs of more than \$0.3 million. This alternative results in total

costs of approximately \$11.4 million, which represents increased annual impacts to the economy of approximately \$4.2 million compared to the proposed regulation.

Alternative 2 was not selected because the department determined the increased requirements impose an undue burden on food service facilities and food service packaging manufacturers without a corresponding increase in benefits.

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 at end of life, and a system must be in place to effectively manage those materials. When some materials are recyclable in some places but not in others or if materials are collected but not recycled or composted, consumers get confused and frustrated. The proposed regulations work with the existing domestic recycling and composting infrastructure, allows for innovative materials to be collected by takeback programs, and will result in increased recycling and composting of food service packaging.

Part E. MAJOR REGULATIONS

Part E.5.: Benefits of the Regulation

The principal benefit of the proposed regulations is the protection of public health and the environment. The primary areas of expected benefits associated with these regulations include the reduction of:

- greenhouse gas emissions,
- litter and cleanup costs,
- contamination of water systems,
- public health,
- impacts to landfills, and
- impacts associated with production from virgin material.

Requiring food service facilities to purchase food service packaging items that have robust recycling or composting markets incentivizes waste haulers to collect these materials and process them. Collecting and processing this material not only keeps it out of the waterways and roadsides but also reduces the impacts (such as greenhouse gas production) from the manufacturing of new goods. Local and state government agencies spend time and money cleaning up beaches, storm drains, and roadways.

STD. 399, FISCAL IMPACT STATEMENT

Part A. FISCAL EFFECT ON LOCAL GOVERNMENT

There will be no additional expenditures by local governments as a result of these regulations.

Part B. FISCAL EFFECT ON STATE GOVERNMENT

CalRecycle required one additional Senior Environmental Scientist (Specialist) position to fulfill its statutory responsibilities.

- Cost impact: \$152,000. Costs for this PY was approved as a permanent position via a budget change proposal in 2019.

DGS anticipates costs related to food service contracts but are unable to determine the size of the impact until the list of product packaging is determined¹⁰. CalRecycle assumes the annual costs to DGS will be \$38,000.

While many food service facilities will be able to pass their increased costs on to their customers, certain agencies (such as prisons, hospitals, military, fire protection, and conservation corps) do not sell their food and therefore will not be able to pass on these additional costs.

- Cost impact: \$2,186,510. These costs may be requested as increased funding in subsequent budgets by the impacted agencies beginning in Fiscal Year 2021-2022. The total cost impact to all state government entities is \$2,376,510.

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