

Final Statement of Reasons

October 2020

Title 14: Natural Resources

Division 7: Department of Resources Recycling and Recovery (the department or CalRecycle)

(New Chapter)

Chapter 12 Short-lived Climate Pollutants

(Amended Chapters)

Chapter 3 Minimum Standards for Solid Waste Handling and Disposal

Chapter 3.1 Composting Operation Regulatory Requirements

Chapter 3.2 In-Vessel Digestion Operations and Facilities Regulatory Requirements

Chapter 5 Enforcement of Solid Waste Standards and Administration of Solid Waste Facilities Permit; Loan Guarantees

Chapter 9. Planning Guidelines and Procedures for Preparing, Revising, and Amending Countywide or Regional Integrated Waste Management Plans

Title 27: Environmental Protection

Division 2: Solid Waste

(Amended Chapters)

Chapter 2 Definitions

Chapter 3 Criteria for All Waste Management Units, Facilities, and Disposal Sites

Chapter 4 Documents and Reporting for Regulatory Tiers Permits, WDRs, and Plans

UPDATED INFORMATIVE DIGEST

The California Integrated Waste Management Act (Act), PRC Section 40000 et. seq., gives the department authority to provide for the protection of public health, safety, and the environment through waste prevention, waste diversion, and safe waste processing and disposal. PRC Section 40502 authorizes the department to adopt rules and regulations to implement the Act.

The proposed regulations implement the department's responsibilities under PRC Sections 42652-42654 as informed by HSC Sections 39730.5-39730.6. This rulemaking implements regulatory requirements to reduce landfill disposal of organic waste in order to achieve the greenhouse gas emissions reductions required by SB 1383.

Specifically, SB 1383 required CalRecycle, in consultation with the California Air Resources Board (ARB), to adopt regulations designed to reduce statewide landfill disposal of organic waste. SB 1383 established two organic waste disposal reduction targets. These targets are tied to the 2014 baseline of 23 million tons of organic waste disposal and must be achieved by 2020 and 2025. The targets are as follows:

- **2020** – 50 percent organic waste reduction from 2014 baseline (11.5 million tons allowed landfill disposal of organic waste)
- **2025** – 75 percent organic waste reduction from 2014 baseline (5.75 million tons allowed landfill disposal of organic waste)

Included within the statutory requirements to reduce organic waste disposal by 75 percent by 2025, is a mandate that CalRecycle's regulations include "requirements intended to meet the goal that not less than 20 percent of edible food that is currently disposed of is recovered for human consumption by 2025." The regulations are designed to achieve these organic waste reduction targets within the authority and direction provided in enabling statute.

Statutory Guidance and Restrictions

The Legislature specifically directed CalRecycle to comply with the following conditions in developing the regulatory requirements.

- Consult with ARB.
- Include requirements designed to recover at least 20 percent of edible food that is currently disposed.
- Develop requirements consistent with the Short-lived Climate Pollutant Reduction Strategy (SLCP Strategy) and the 2017 Integrated Energy Policy Report.
- Support cost-effective, and environmentally beneficial uses of biomethane derived from solid waste facilities.

The Legislature further included language that specifies that CalRecycle's regulations may include policies and requirements that:

- Enable the department to impose penalties on regulated entities beginning in 2022, (and allow jurisdictions (e.g. cities and counties) to impose such penalties beginning in 2024).
- Require jurisdictions to impose requirements on relevant entities.
- Establish different levels of requirements for jurisdictions.

The Legislature prohibited CalRecycle from including provisions in the regulations that:

- Impose an organic waste ban on individual landfills.
- Require jurisdictions to impose penalties on regulated entities prior to 2024.
- Impose 50 percent and 75 percent recycling targets on individual jurisdictions.

Finally, SB 1383 departs from previous recycling mandates in that it does not simply require diversion of material from landfills. The statute requires that material must also be diverted to activities that reduce greenhouse gas emissions.

Elements of the Regulations

CalRecycle, in consultation with ARB, developed a regulatory framework that is consistent with the SB 1383 statutory requirements noted above. The core aspects of the regulatory framework define or require the following actions:

(A) Activities Constituting a Reduction in Landfill Disposal

1. Disposal activities are defined as actions that result in organic waste being deposited into a landfill.
2. Recovery activities are defined as actions that keep organic waste out of landfills and reduce greenhouse gas emissions.

(B) Organic Waste Collection Services

1. Jurisdictions must provide residential and commercial organic waste collection services.
2. Jurisdictions must conduct minimum levels of education, outreach, and contamination monitoring for their collection services.
3. Residents and businesses must subscribe to collection services for organic waste that is not source-reduced, managed on-site, or self-hauled.

(C) Edible Food Recovery Programs and Services

1. Jurisdictions must implement and oversee edible food recovery programs.
2. Commercial edible food generators must establish documented arrangements with food recovery services or organizations.

(D) Procurement of Recovered Organic Waste Products

1. Jurisdictions must procure minimum levels recovered organic waste products including of compost, mulch, or renewable natural gas and electricity.
2. Jurisdictions must meet minimum recycled content and recyclability standards for paper products.

(E) Recordkeeping and Reporting by Regulated Entities

1. Regulated entities are required to keep records demonstrating compliance with the regulations.
2. Jurisdictions, haulers, and facilities must report on compliance with specific aspects of the regulations.

(F) Enforcement and Oversight

1. CalRecycle will primarily oversee jurisdictions and entities outside of local government regulatory authority.
2. Jurisdictions will primarily oversee entities subject to their authority (e.g. generators, haulers, and other entities).

(G) Organic Waste Recovery and Processing Standards for Facilities

1. Facilities must achieve recovery rates for organic waste that is collected with non-organic waste.
2. Facilities must reduce the level of incompatible materials (e.g., non-organic waste) present in organic waste prior to sending that waste to additional processing or recovery activities.

MAJOR REGULATORY PROVISIONS AND REQUIREMENTS AND SUMMARY OF MAJOR CHANGES MADE THROUGH THE RULEMAKING PROCESS

Major Changes in June 2019:

Article 3 - Organic Waste Collection Services

- **Collection**
 - Reduced contamination route review frequency from quarterly to annually.
 - Authorized a jurisdiction to meet its contamination monitoring requirements through a facility based monitoring program.
 - Clarified that a jurisdiction is allowed to provide an “uncontainerized” green waste collection service.
 - Added provisions relative to the use of plastic bags for organic waste collection.
 - Added provisions relative to the collection of compostable plastics with organic waste.
- **Containers**
 - Delayed container color standardization date to 2036.
 - Changed “yellow container” to “brown container” for jurisdictions providing an additional container for food waste and specified colors that may be used if additional container separation is provided.
 - Revised the two-container collection service containers to be either green and gray, or blue and gray.
- **Low Population Waivers**
 - Increased incorporated city population waiver eligibility to 7,500.
 - Increased census tract density waiver eligibility to 75 people per square mile.
- **Elevation Waivers**
 - Added waivers exempting areas located at an elevation of 4,500 feet above sea level from the requirement to include food waste and food soiled paper in their organic waste collection service.
- **Emergency Circumstances**
 - Clarified that disaster waivers apply to organic waste collection services in impacted jurisdictions.
 - Added provisions exempting debris from homeless encampments from recovery requirements.
 - Added provisions authorizing disposal of quarantine material under limited circumstances.

Article 4 - Education and Outreach

- Revised outreach requirements to require use of print or electronic media.
- Revised requirements for providing organic waste collection educational materials to non-English speaking residents.

Article 6 – Biosolids Generated at a Publicly Owned Treatment Works (POTW)

- Deleted requirement that biosolids can only be sent to a recovery facility.

Article 10 – Jurisdiction Edible Food Recovery Programs, Food Generators, and Food Recovery

- Added provisions clarifying that commercial edible food generators must recover edible food unless specified “extraordinary circumstances” exist.
- Eliminated threshold for record keeping for food recovery services and organizations.

Article 11 - Organic Waste Recycling Capacity Planning

- Clarified the requirements for using a local waste characterization study.
- Clarified the role of cities, counties, and other entities involved in capacity planning process.

Article 12 - Procurement of Recovered Organic Waste Products

- Added that jurisdictions must adopt an ordinance or other enforceable requirement that requires compliance with the applicable sections of the Model Water Efficient Landscape Ordinance (MWELO).
- Expanded the range of renewable natural gas uses that count towards a jurisdiction’s procurement target.
- Added electricity derived from biomass conversion facilities to the range of uses that counts toward a jurisdiction’s procurement target.
- Added provisions specifying that POTWs and biomass conversion facilities must source material from solid waste facilities in order for their products to count toward jurisdiction’s procurement target.
- Added provisions specifying that renewable gas derived from POTWs is only eligible to count toward a jurisdiction’s procurement target if the POTW recovers 75 percent of its biosolids.
- Aligned paper procurement requirements with the Public Contracts Code.

Article 13 - Reporting

- Limited initial compliance report to information relevant to organic waste collection service requirements and moved report date back to April 1, 2022.
- Moved initial capacity planning report date back to August 1, 2022.

Article 14 – Enforcement Requirements

- Eliminated the requirement that jurisdictions impose per-day penalties.
- Revised penalty timeframes to define a “second and subsequent offense” as an offense that occurs within 12 months of the original offense.

Article 15 – Enforcement Oversight by the Department

- Authorized an initial Corrective Action Plan issued due to inadequate capacity to be extended by a period of up to 12 months.
- Revised penalty calculations for violations of recovered organic waste product procurement requirements.

Article 17 - Performance-Based Source-Separated Organic Collection Service

- Authorized jurisdictions, in-lieu of implementing specified provisions of the regulation, to implement a performance-based source separated organic collection service.
 - A Jurisdiction implementing a performance-based source separated organic collection service, shall achieve the following:
 - Provide a three-container organic waste collection service to 90 percent of generators subject to the jurisdictions authority.

- Transport all source separated organic waste collection containers to designated source separated organic waste recovery facility that recovers 75 percent of all organic content.
 - Demonstrate that less than 25 percent of the content of gray (disposal) containers is organic waste.
- A jurisdiction implementing a performance-based source separated organic collection service is not required to comply with specified aspects of the regulation related to contamination monitoring, enforcement, education and outreach, reporting and other provisions.

Solid Waste Facility Requirements

- **Organic Waste Recovery and Processing Standards**
 - Replaced daily sampling frequency with quarterly sampling periods.
 - Replaced daily contamination load checking requirements with periodic gray container waste evaluations.
 - Added recordkeeping and Local Enforcement Agency (LEA) monitoring requirements for compostable material sent to land application.
 - Added reporting requirements for recovery efficiency measurements for the source separated organic waste collection stream.
 - Eliminated requirements for LEAs to observe at least one sample of each measurement per quarter at every solid waste facility.
- **Solid Waste Landfills**
 - Eliminated long term cover requirements.
 - Replaced daily contamination load checking requirements with periodic gray container waste evaluations.
 - Revised Status Impact Report (SIR) to require an analysis on effectiveness of intermediate cover that is used for a period of more than 12 months.

Major Changes in October 2019:

Article 3 - Organic Waste Collection Services

Section 18984.5 Container Contamination Minimization

Waste Composition Studies aligned with Performance-Based Source Separated Organic Waste Collection Service requirements.

- **Section 18984.12 Waivers and Exemptions Granted by the Department**
 - Rural exemptions extended to December 31, 2026.

Article 4 - Education and Outreach

- **Section 18985.1. Organic Waste Recovery Education and Outreach**
 - Linguistic outreach requirements aligned with Section 7295 of the Government Code.

Article 11 - Capacity Planning

- **Section 18992.1. Organic Waste Recycling Capacity Planning**
 - Jurisdictions that are temporarily exempt from organic waste collection service requirements are exempt from the first organic waste capacity planning period.
 - Expanded use and applicability of local studies and data for capacity planning.

Article 12 - Procurement of Recovered Organic Waste Products

- **Section 18993.1 Recovered Organic Waste Product Procurement Target**
 - Allow mulch that is derived from solid waste facilities to count toward a jurisdiction's procurement target.
 - Exempt rural jurisdictions from procurement requirements until December 31, 2026.

Article 16 - Penalties

- **Section 18997.2. Penalty Amounts**
 - Removed jurisdiction penalty tables.
- **Section 18997.3 Department Penalty Amounts**
 - Replaced CalRecycle penalty tables with standardized penalty calculations.

Solid Waste Facility Requirements

- **Section 17409.5.7 Gray Container Waste Evaluations**
 - Reduced sampling size and monitoring frequency at transfer stations.
- **Section 17509.5.8 Incompatible Materials Limit (ICM) in Recovered Organic Waste**
 - Phase in ICM levels for transfer stations beginning at 20% in 2022 and 10% in 2024.
 - Phase in residual organic waste levels at compost and in vessel digestion facilities to begin at 20% in 2022 and 10% in 2024.
- **Section 17409.5.9. Alternatives to Measurement Protocols**
 - Allow use of an end-user contamination standard in-lieu of sampling requirements.
- **Section 18083. LEA Duties and Responsibilities for Inspections**
 - Revised LEA land application monitoring inspection requirements to focus on monitoring at existing solid waste facilities.
- **Section 20901 – 20901.2 Gray Container Waste Evaluations**
 - Removed gray container waste evaluation requirements for landfills.
- **Section 21695. CalRecycle—Organic Disposal Reduction Status Impact Report (SIR)**
 - Revised and streamlined the SIR reporting requirements. Eliminated requirements to make alternative intermediate cover as effective as final cover.

Major Changes in April 2020:

Solid Waste Facility Requirements

- **Section 17402(a)(6.7)**
 - Deletion of “hauler” definition as unnecessary because the term does not appear in any relevant manner in the relevant articles.
- **Section 17402(a)(18.6) and (18.7)**
 - Definitions of “Source Separated Organic Waste” and “Source Separated Blue Container Organic Waste” renumbered to (a)(26.6) and (26.7) so as to appear in alphabetical order.
- **Section 17409.5.9**
 - Clarified language changes to describe Department concurrence conditions for measurement alternatives.
- **Section 17852(a)(23.5)**
 - Deletion of “hauler” definition as unnecessary because the term does not appear in any relevant manner in the relevant articles.
- **Section 17867(a)(16)(E)**
 - Clarified language changes to describe Department concurrence conditions for measurement alternatives.
- **Section 17896.2(a)(12.5)**

- Deletion of “hauler” definition as unnecessary because the term does not appear in any relevant manner in the relevant articles.
- **Section 17896.25**
 - Removal of section from scope of rulemaking because sole change to section heading was unnecessary.
- **Section 17896.44.1(d)**
 - Clarified language changes to describe Department concurrence conditions for measurement alternatives.
- **Section 18815.5(e)**
 - Clarified language changes to make clear requirements apply to high diversion organic waste processing facilities described in Section 18982(a)(3).

General Provisions

- **Section 18981.1**
 - Deletion of unnecessary, non-regulatory narrative language.

Article 1 - Definitions

- **Section 18982(a)(30.5)**
 - Clarified definition of “hazardous wood waste” to align more specifically with Title 22 definition of “Treated Wood” or “Treated wood waste.”

Article 3 - Organic Waste Collections Services

- **Section 18984**
 - Deletion of unnecessary, non-regulatory narrative language.
 - Added missing section heading.
- **Section 18984.3(f)**
 - Clarified the phrase “an option” to specify “a collection service.”
- **Section 18984.4(B)**
 - Removed requirement for jurisdictions to maintain copies of quarterly and annual average mixed waste organic content recovery rates for certain solid waste facilities. Such information will already be available from the Department’s Recycling and Disposal Reporting System (RDRS) under reporting requirements.
- **Section 18984.5(a)**
 - Clarified that generators shall not place prohibited container contaminants in collection containers.
- **Section 18984.5(b)(3)**
 - Clarified that jurisdictions are not affirmatively required to impose penalties on generators found in violation of prohibited container contaminant requirements.

- **Section 18984.5**
 - Removed requirements for jurisdiction designees to inform jurisdictions of certain information regarding observed prohibited container contaminants and removal of limitations on disposal of contents of containers with prohibited container contaminants.
- **Section 18984.5(c)(2)(A)**
 - Addition of allowance for electronic message notices to generators regarding prohibited container contaminants.
- **Section 18984.5(d)**
 - Clarified language on notification requirements to the Department for exceedance of prohibited container contaminant percentage in the gray container collection stream and the regulatory consequences of that exceedance.
- **Section 18984.11(a)(2)(A)**
 - Clarified that an engineer shall be licensed and removing the phrase “similarly qualified source” for lack of clarity.
- **Section 18984.13(b)(2)**
 - Clarified “may” to “shall” for clarity on Department action.

Article 7 - Regulations of Haulers

- **Section 18988.2(c)(1)**
 - Clarified language on applicability of the section to certain haulers.

Article 9 - Locally Adopted Standards and Policies

- **Section 18990.1(c)(5)**
 - Clarified citations to Title 22 and Title 3.

Article 13 - Reporting

- **Section 18994.2(a)**
 - Clarified the timing of annual reporting to the Department.

Article 14 - Enforcement Requirements

- **Section 18995.2(d)**
 - Clarified the timing of inclusion of records and information in the Implementation Record.
- **Section 18995.4**
 - Changed all references to “offense” or “offenses” to “violation” or “violations” for language consistency.
- **Section 18995.4(a)**
 - Added cross-reference to Section 18984.5(b)(3) to clarify that violations of prohibited container contaminants requirements are not subject to the enforcement process under this section.
- **Section 18995.4(a)(1)**
 - Removed timing for issuance of Notice of Violation. Replacing with maximum compliance deadline under Notice of Violation.
- **Section 18995.4(a)(2)**

- Removed due to lack of clarity and language conflicts with Subsection (3)(A) timeframes for commencement of penalty action.
- **Section 18995.4(a)(3)**
 - Renumbered and edited to a general requirement for jurisdictions to commence penalty action due to lack of compliance with a deadline in a Notice of Violation.
- **Section 18995.4(b)**
 - Clarified language regarding compliance deadline in Notice of Violation.

Article 15 - Enforcement Oversight by the Department

- **Section 18996.2(a)**
 - Clarified language changes for Department enforcement procedure.
- **Section 18996.2(a)(1)**
 - Changed “may” to “shall” for clarity on Department action.
- **Section 18996.2(a)(2)**
 - Changed “may” to “shall” for clarity on Department action.
- **Section 18996.2(a)(2)(A)**
 - Changed “may” to “shall” for clarity on Department action.
- **Section 18996.2(a)(2)(A)3**
 - Changed “may” to “shall” for clarity on Department action and Clarified cross-reference to regulatory section regarding implementation schedules.
- **Section 18996.3**
 - Changed “may” to “shall” for clarity on Department action.
- **Section 18996.5(d) and (e)**
 - Changed “may” to “shall” for clarity on Department action.
- **Section 18996.6(a), (a)(1), (a)(2)**
 - Changed “may” to “shall” for clarity on Department action.
- **Section 18996.7(a)**
 - Changed “may” to “shall” for clarity on Department action.
- **Section 18996.9(a), (b)(1)(A), (b)(2)(A), (b)(2)(B), (c)**
 - Changed “may” to “shall” for clarity on Department action.
- **Section 18996.9**
 - Changed all references to “offense” to “violation” for language consistency.
- **Section 18996.9(b)(2)**
 - Clarified language regarding timing of second or subsequent violations for purposes of enforcement procedure.
- **Section 18996.9(b)(2)(C)**
 - Deletion of Subdivision regarding determination of second, third or subsequent offenses. Timing of violations instead subject to Clarified language in Subdivision (b)(2) as described above.

Article 16 - Administrative Civil Penalties

- **Section 18997.2(a)(1) – (3)**
 - Changed all references to “offense” to “violation” for language consistency.
- **Section 18997.3(b)(2)**

- Deletion of language regarding “critical aspects of the requirement” due to lack of clarity.
- **Section 18997.3(b)(3)(F)**
 - Clarification that a failure to submit the reports required in 18994.1 and 18994.2 will be considered a “major” violation.
- **Section 18997.3(d)**
 - Clarified changes to penalty determinations for Recovered Organic Waste Product Procurement requirements.

Article 17 - Performance-Based Source Separated Organic Waste Collection Services

- **Section 18998**
 - Deletion of unnecessary, non-regulatory narrative language.
- **Section 18998.1(e)**
 - Language clarification and clarification of regulatory cross- references regarding applicability of Subdivision (d) to certain haulers.
- **Section 18998.2(a)(5)**
 - Clarified that jurisdictions are relieved of recordkeeping requirements in Section 18985.2 except as those requirements apply to edible food recovery education and outreach.

TECHNICAL, THEORETICAL AND/OR EMPIRICAL STUDY, REPORTS, OR DOCUMENTS

The following documents and records were relied upon in the rulemaking, were noticed and made available to the public for a 30 day comment period commencing April 20, 2020, and are included in the rulemaking record:

1. ASTM International: Standard Test Methods:
 - a. Standard Test Methods for Determination of the Composition of Unprocessed Municipal Solid Waste;; Designation: D-5231-92 (Reapproved 2003))
 - b. Standard Specification for Labeling of Plastics Designed to be Aerobically Composted in Municipal or Industrial Facilities. Designation: D6400 – 12
2. Biosolids use and disposal for 2014- 2017. Data provided by California Association of Sanitation Agencies (CASA).
3. Burger, Zhu and Green: Research to Evaluate Environmental Impacts of Direct Land Application of Uncomposted Green and Woody Wastes on Air and Water Quality. Contractors Report Produced for CalRecycle March 30, 2015
4. Chestnut et al. 2006. The Economic Value of Preventing Respiratory and Cardiovascular Hospitalizations: Contemporary Economic Policy (ISSN 1074-3529) doi:10.1093/cep/byj007 Vol. 24, No. 1, January 2006
<http://onlinelibrary.wiley.com/doi/10.1093/cep/byj007/full>
5. City of Los Angeles RecycLA Service Providers (RSPs) and Certified Facilities Waste Composition Study Guidelines. August 2018
6. CNG NOW Average CNG Price by State. <http://www.cngnow.com/average-cng-prices/pages/default.aspx>

7. County Biosolids Ordinance Status 2017. Data provided by California Association of Sanitation Agencies.
8. Fann et. al., 2009. Fann N, Fulcher CM, Hubbell BJ. The influence of location, source, and emission type in estimates of the human health benefits of reducing a ton of air pollution Air Quality. Atmosphere & Health. 2:169-176.
9. Fann et. al., 2012. Fann N, Baker KR, Fulcher CM. Characterizing the PM2.5-related health benefits of emission reductions for 17 industrial, area and mobile emission sectors across the U.S. Environ Int. 2012 Nov 15;49:141-51.
10. Fann et. al., 2018. Fann N, Baker K, Chan E, Eyth A, Macpherson A, Miller E, Snyder J. Assessing Human Health PM2.5 and Ozone Impacts from U.S. Oil and Natural Gas Sector Emissions in 2025. Environ. Sci. Technol. 52 (15), pp 8095–8103.
11. Financial Statements, Consolidated Statements of Financial Position, and Independent Auditors Reports, on the financial records of the following food banks were used to estimate per ton costs for capital expenditures and operations and management for edible food recovery [listed name of organization, auditing entity, date of audit]:
 - a. Central California Food Bank and Subsidiary: Moss Adams, November 29, 2018
 - b. Los Angeles Regional Food Bank, Singer Lewak May 8, 2018
 - c. Merced County Food Bank: David Bruner, March 20, 2018
 - d. Food Bank For Monterey County: Hayashi Wayland, September 30, 2016
 - e. Second Harvest Food Bank of Orange County: White Nelson Diel Evans, November 12, 2018
 - f. San Diego Food Bank: Considine & Considine, October 12, 2018
 - g. Yolo Food Bank: Joseph Skowron. December 15, 2018
12. Frasz et al., Food Rescue Services, Barriers, and Recommendations in Santa Clara County, pgs. 19, 26, & 41, 2015,
<https://www.sccgov.org/sites/rwr/rwrc/Documents/FoodShiftFinalReport.pdf>
13. Gravuer, Kelly: Compost Application Rates for California Croplands and Rangelands for a CDFA Healthy Soils Incentives Program. July 22, 2016.
https://www.cdfa.ca.gov/oefi/efasap/docs/CompostApplicationRate_WhitePaper.pdf.
14. ICF International, 10/30/2009 memo from ICF International to US EPA
https://www.epa.gov/sites/production/files/2016-03/documents/warm_decay_rate_structure_10_30_2009.pdf. Referenced in CARB 18983.2 subdivision a3 Appendix Document, footnote 7. Filename: warm_decay_rate_structure_10_30_2009.pdf
15. Institute of Scrap Recycling Industries, Inc., Scrap Specifications Circular, p.62 February 2018, <http://www.scrap2.org/specs>.
16. IPCC Waste Model Volume 5 – Referenced in CARB 18983.2 subdivision a3 Appendix Document, footnote 5. https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/5_Volume5/IPCC_Waste_Model.xls. Filename: IPCC_Waste_Model.xls
17. IPCC 2006, 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Prepared by the National Greenhouse Gas Inventories Programme, Eggleston H.S., Buendia L., Miwa K., Ngara T. and Tanabe K. (eds). Published: IGES, Japan.
https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/5_Volume5/V5_3_Ch3_SWDS.pdf.
18. Jarvis, CH Stuart, N. 2001. A comparison among strategies for interpolating maximum and minimum daily air temperatures. Part II: The interaction between number

- of guiding variables and the type of interpolation method. J. Appl. Meteor. 40, 1075-1084.
19. Lyons, Dani: Food Forward, E-mail regarding estimated reporting costs for food recovery organizations. July 2019.
 20. Pacific Gas and Electric, Gas Rate Finder. Volume 47-G, No. 5. May 2019
 21. Ibid., Solar Choice Cost https://www.pge.com/en_US/residential/solar-and-vehicles/options/solar/solar-choice/rate-calculator.page Accessed May 2019
 22. Regional Economic Models, Inc (REMI) Results for CalRecycle. Economic modeling workbook prepared for CalRecycle by REMI, estimating economic impacts resulting from the regulations.
 23. RISI, Pulp&Paper Week: Monthly Recovered Paper Price Watch, May and June 2019, RISI, Inc., Downloaded from <https://www.risiinfo.com/>
 24. RISI, Pulp&Paper Week: Monthly Recovered Paper Prices
 25. Southern California Edison Green Rate and Community Renewables Programs. https://www.sce.com/sites/default/files/inline-files/G18-013_Green%2BRate%2BResidential%2BFact%2Bsheet-AA.pdf
 26. Southern California Gas Company, Schedule No. G-10 Core Commercial and Industrial Service, Advice Letter No. 5544. Filed November 7, 2019.
 27. State of California, Air Resources Board, 2010a. California Air Resources Board, Appendix J of Staff Report, Initial Statement of Reasons for Proposed Rulemaking, “Proposed Amendments to the Truck and Bus Regulation, the Drayage Truck Regulation and the Tractor-Trailer Greenhouse Gas Regulation” (2010).
 28. Ibid., 2014 Edition of California’s 2000-2012 GHG Emission Inventory Technical Support Document, downloadable from https://ww3.arb.ca.gov/cc/inventory/doc/methods_00-12/ghg_inventory_00-12_technical_support_document.pdf. Referenced in CARB 18983.2 subdivision a3 Appendix Document, footnotes 10 and 11. Filename: ghg_inventory_00-12_technical_support_document.pdf
 29. Ibid, Biomass Conversion. September 17, 2013, <https://www.arb.ca.gov/cc/waste/biomassconversion.pdf>.
 30. Ibid., CA-GREET3.0 Model and Simplified CI Calculators (proposed under 2018 amendments), <https://www.arb.ca.gov/fuels/lcfs/ca-greet/ca-greet.html>.
 31. Ibid., Climate Change Scoping Plan, https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf.
 32. Ibid., 2010b. Estimate of Premature Deaths Associated with Fine Particle Pollution (PM2.5) in California Using a U.S. Environmental Protection Agency Methodology. Available at https://www.arb.ca.gov/research/health/pm-mort/pm-report_2010.pdf.
 33. Ibid., Final Draft Method for Estimating Greenhouse Gas Emission Reductions from Diversion of Organic Waste from Landfills to Compost Facilities. May 2017.
 34. Ibid., 2019. California Air Resources Board’s Methodology for Estimating the Health Effects of Air Pollution. Available at <https://ww2.arb.ca.gov/resources/documents/carbs-methodology-estimating-health-effects-air-pollution>.
 35. Ibid., Short-Lived Climate Pollutant Reduction Strategy. March 14, 2017.

36. Ibid., _Staff Guidance Memo Prepared For CalRecycle-document explaining calculations related to Article 2.
37. State of California, California Energy Commission. 2017 Integrated Energy Policy Report. 2017. Publication Number: CEC-100-2017-001-CMF. https://www.energy.ca.gov/2017_energypolicy/.
38. State of California, Department of Finance, California State Data Center, American Community Survey: Housing Characteristics – Occupancy, Costs, Tenure, Units by Type(.xlsx).www.dof.ca.gov/Reports/Demographic_Reports/American_Community_Survey/documents/Web_ACS2018_Housing.xlsx. Accessed July 2019.
39. Ibid., E-5 Population and Housing Estimates for Cities, Counties and the State — January 1, 2011-2019. Sacramento, California, May 2019.
40. Ibid., P-1: State Population Projections 2010-2060, www.dof.ca.gov/Forecasting/Demographics/Projections/.
41. State of California, Department of Resources Recycling and Recovery, AB 901 Recycling and Disposal Reporting System Final Statement of Reasons, January 29, 2019. <https://www.calrecycle.ca.gov/laws/rulemaking/archive/2019/ab901reporting#Documents>
42. Ibid., Appendix A Cost Update, November 2019. CalRecycle staff prepared document includes additional analysis of the potential costs and benefits associated with the regulation. Document and references were released for a 15-day comment period in November of 2019.
43. Ibid., California Statewide Per Resident, Per Employee, and Total Disposal Since 1989. Updated April 25, 2019. <https://www.calrecycle.ca.gov/lgcentral/goalmeasure/disposalrate/graphs/disposal>
44. Ibid., California 2008 Statewide Waste Characterization Study. 2009. Publication no. IWMB-2009-023. Downloadable from <https://www2.calrecycle.ca.gov/Publications/Download/911>. Referenced in CARB 18983.2 subdivision a3 Appendix Document, footnote 4
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POLICY STATEMENT OVERVIEW

Implementation of SB 1383 and the SLCP Strategy is an integral part of the state's climate change program outlined in the 2017 Climate Change Scoping Plan (Scoping Plan). The

SLCP Strategy requires immediate reductions of the most potent greenhouse gases, and is expected to provide 35 percent of the greenhouse gas emissions reductions needed to meet the state's 2030 greenhouse gas emissions reduction targets. The success of the SLCP Strategy relies on a portfolio of policies and measures across various sectors. The measures required for the waste sector will foster the development of a more sustainable economy, reduce global emissions, reduce hunger, and safeguard public health.

SB 1383 and the SLCP Strategy require California to reduce organic waste disposal 50 percent below 2014 levels by 2020 and 75 percent by 2025. The organic waste disposal reduction targets required by SB 1383 are measured against a 2014 baseline of approximately 23 million tons of organic waste disposal.

These targets will be more difficult to maintain as population and waste generation inevitably increase. CalRecycle projects population growth will result in the generation of approximately 32 million tons of organic waste annually by 2025. This results in the 2025 target requiring the state to source-reduce, reuse, or recover approximately 27 million out of 32 million tons of organic waste in 2025, with the amount necessary to recover continuing to increase in subsequent years.

Removing organic waste from landfills prevents the creation of methane from the anaerobic breakdown of the material. This methane can work its way out of the landfill as fugitive emissions, and these emissions currently represent 21 percent of the state's methane emissions annually. Achieving these targets will reduce an increasing amount of greenhouse gas emissions, ultimately achieving annual reductions of at least 8 Million Metric Tons of CO₂ equivalents (MMTCO₂e) annually by 2030. In addition, one year of waste diversion avoids 14 MMTCO₂e over the lifetime of waste decomposition.

Further, SB 1383 requires actions that will reduce poverty-induced hunger by recovering 20 percent of the edible food that is currently disposed. In addition to avoiding landfill methane emissions, the recovery of edible food provides an opportunity to feed millions of food-insecure Californians. The overall food insecurity rate in California is 12.5 percent, meaning that approximately 1 out of every 8 Californians does not know where their next meal will come from. The rate for children is much higher, resulting in approximately 1 in 5 children going to bed hungry each night. Edible food rescue programs resulting from these regulations will increase the recovery of edible food for human consumption resulting in decreased food insecurity and healthier communities.

Implementation of SB 1383 and the SLCP Strategy will help protect California's economy, environment, and residents from the impacts of climate change. California is already experiencing the impacts of climate change today. Extreme temperatures, prolonged droughts, and reduced snowpack stemming from global warming are producing significant and measurable economic impacts. These climate events are also increasing the frequency of natural disasters such as wildfires, which have a catastrophic effect on public health and the environment.¹ Safeguarding California from climate change impacts

¹ California Air Resources Board, California's 2017 *Climate Change Scoping Plan*, ES-1. November 2017. https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf.

today requires immediate action. ARB, the agency charged with monitoring and regulating sources of greenhouse gas emissions has found, “The only practical way to rapidly reduce the impacts of climate change is to employ strategies built on the tremendous body of science. The science unequivocally underscores the need to immediately reduce emissions of short-lived climate pollutants...”²

SB 1383 and the SLCP Strategy requires the state to rapidly employ strategies that will yield immediate reductions of short-lived climate pollutants that exert a warming influence that is exponentially more potent than carbon dioxide (CO₂). The warming influence of these gases, such as methane released from landfills, occur over a much shorter period than CO₂ (which lasts for approximately 100 years in the atmosphere). Therefore, actions to reduce or eliminate these greenhouse gasses today will yield immediate climate change benefits as the presence of these gases in the atmosphere declines and their significant warming potential is avoided.

The provisions of this regulation implement the waste sector aspects of SB 1383, the SLCP Strategy, and the Scoping Plan. This regulation is designed to achieve the organic waste reduction targets codified in SB 1383 by requiring programs and policies that divert organic waste from landfill disposal to recovery activities that prevent, reduce, or eliminate the methane generation potential of organic waste.

Achieving the waste sector reductions required by SB 1383 and these regulations will result in significant public health, economic, and environmental benefits for the people of California. Initiating the SB 1383 rulemaking is both a necessary and an effective measure the state must take to meet its climate change goals, and safeguard California from the impacts of global warming.

PROBLEM ADDRESSED BY AND BENEFITS OF REGULATIONS

Implementation of SB 1383 (Lara, Chapter 395, Statutes of 2016) and the Short-Lived Climate Pollutant Reduction Strategy (SLCP Strategy) is an integral part of the state’s climate change program outlined in the 2017 Climate Change Scoping Plan (Scoping Plan). The SLCP Strategy requires immediate reductions of the most potent greenhouse gases, and is expected to provide 35 percent of the greenhouse gas emission reductions needed to meet the state’s 2030 greenhouse gas emission reduction targets. The success of the SLCP Strategy relies on a portfolio of policies and measures across various sectors. The measures required for the waste sector will foster the development of a more sustainable economy, reduce global emissions, reduce hunger, and safeguard public health.

SB 1383 and the SLCP Strategy require California to reduce organic waste disposal 50 percent below 2014 levels by 2020 and 75 percent by 2025. The organic waste disposal reduction targets required by SB 1383 are measured against a 2014 baseline of

² California Air Resources Board: *Short-Lived Climate Pollutant Reduction Strategy*, Page 1. March 14, 2017. https://www.arb.ca.gov/cc/shortlived/meetings/03142017/final_slcp_report.pdf.

approximately 23 million tons of organic waste disposal. Using this baseline, the targets are as follows:

- **2020:** +/- 11.5 million tons (50 percent organic waste reduction from 2014 baseline)
- **2025:** +/- 5.75 million tons (75 percent organic waste reduction from 2014 baseline)

These targets will be more difficult to maintain as population and waste generation inevitably increase. CalRecycle projects population growth will result in the generation of approximately 32 million tons of organic waste annually by 2025. This results in the 2025 target requiring the state to source reduce, reuse, or recover approximately 27 million out of 32 million tons of organic waste in 2025, with the amount necessary to recover continuing to increase in subsequent years.

Removing organic waste from landfills prevents the creation of methane from the anaerobic breakdown of the material. This methane can work its way out of the landfill as fugitive emissions, and these emissions currently represent at least 21 percent of the state's methane emissions annually. Achieving these targets will reduce an increasing amount of greenhouse gas emissions, ultimately achieving annual reductions of at least 8 Million Metric Tons of CO₂ equivalents (MMTCO₂e) annually by 2030. In addition, one year of waste diversion avoids 14 MMTCO₂e of emissions over the lifetime of waste decomposition.

Further, SB 1383 requires actions that will reduce poverty-induced hunger by recovering 20 percent of the edible food that is currently disposed. In addition to avoiding landfill methane emissions, the recovery of edible food provides an opportunity to feed millions of food-insecure Californians. The overall food insecurity rate in California is 12.5 percent, meaning that approximately 1 out of every 8 Californians does not know where their next meal will come from. The rate for children is much higher, resulting in approximately 1 in 5 children going to bed hungry each night. Edible food rescue programs resulting from these regulations will increase the recovery of edible food for human consumption resulting in decreased food insecurity and healthier communities.

Benefits of the Regulation

Implementation of SB 1383 and the SLCP Strategy will help protect California's economy, environment, and residents, from the impacts of climate change. California is already experiencing the impacts of climate change today. Extreme temperatures, prolonged droughts, and reduced snowpack stemming from global warming are producing significant and measurable economic impacts. These climate events are also increasing the frequency of natural disasters such as wildfires, which have a catastrophic effect on public health and the environment.³ Safeguarding California from climate change impacts today requires immediate action. The California Air Resources Board (ARB), the agency charged with monitoring and regulating sources of the GHG emissions has found, "The only practical way to rapidly reduce the impacts of climate change is to employ strategies

³ California Air Resources Board, California's 2017 *Climate Change Scoping Plan*, ES-1. November 2017. https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf.

built on the tremendous body of science. The science unequivocally underscores the need to immediately reduce emissions of short-lived climate pollutants...”⁴

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The provisions of this regulation implement the waste sector aspects of SB 1383, The SLCP Strategy, and the Scoping Plan. This regulation is designed to achieve the organic waste reduction targets codified in SB 1383 by requiring programs and policies that divert organic waste from landfill disposal to recovery activities that prevent, reduce or eliminate the methane generation potential of organic waste.

Achieving the waste sector reductions required by SB 1383 and these regulations will result in significant public health, economic, and environmental benefits for the people of California.

Public Health Benefits include improved air quality, decreased hospitalization, and decreased mortality rates, collectively these benefits will avoid \$10.4-12 billion in costs.

Economic Benefits include improved state GDP as the state realizes \$28 billion in benefits from avoided disposal fees and new revenues from organic waste recycling facilities. Recycling organic waste will create 90-110 new or expanded in-state recycling and remanufacturing facilities and 17,000 jobs. This will also result in the creation of 3,000 temporary construction jobs.

Environmental Benefits are far-reaching and include improved soil water retention and carbon sequestration resulting from increased application of compost, reduced demand for landfill capacity and expansion, and reduced reliance on fossil fuels. Finally, reduced methane emissions (projected 4MMMTCO₂e annually) will result in \$865 - \$2.4 billion in benefits from avoided climate change mitigation costs.

Initiating the SB 1383 rulemaking is both a necessary and an effective measure the state must take to meet its climate change goals, and safeguard California from the impacts of global warming.

LOCAL MANDATE AND FISCAL DETERMINATIONS

⁴ California Air Resources Board: *Short-Lived Climate Pollutant Reduction Strategy*, Page 1. March 14, 2017. https://www.arb.ca.gov/cc/shortlived/meetings/03142017/final_slcp_report.pdf.

The Department has determined that the regulations do not impose: a mandate on local agencies or school districts that requires State reimbursement pursuant to Part 7, commencing with section 17500 of Division 4 of the Government Code; significant costs or savings to any state agency; other non-discretionary costs or savings on local agencies; or, costs or savings in federal funding to the state.

Pursuant to SB 1383 (Lara, Chapter 395, Statutes of 2016):

- PRC, 42652.5 (b) A local jurisdiction may charge and collect fees to recover the local jurisdiction's costs incurred in complying with the regulations adopted pursuant to this section.
- SEC. 7. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because a local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the program or level of service mandated by this act, within the meaning of Section 17556 of the Government Code.

DUPLICATION OR CONFLICTS WITH CODE OF FEDERAL REGULATIONS

Pursuant to Government Code section 11346.2(b)(6), the Department found that there are no federal laws or regulations comparable to the proposed regulations; therefore, these regulations do not duplicate or conflict with any federal law or regulation. Accordingly, the Department is not adopting regulations differing from federal regulations

MANDATED USE OF SPECIFIC TECHNOLOGIES OR EQUIPMENT

The proposed regulations do not mandate the use of specific technologies or equipment.

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

CalRecycle has found that the reporting requirements of the proposed regulatory action, which apply to businesses, are necessary for the health, safety, and welfare of the people of the State of California.

REASONABLE ALTERNATIVES TO THE PROPOSED REGULATORY ACTION

The department considered two alternatives to the regulation in its Standardized Regulatory Impact Assessment (described below). Using this analysis, the department determined that no alternative it considered would be more effective in carrying out the purpose for which the regulation is proposed, would be as effective and less burdensome to affected private persons than the adopted regulation, or would be more cost effective to affected private persons and equally effective in implementing the statutory policy or

other provision of law. The department has attempted to use reasonable performance standards rather than prescriptive standards to minimize the impact on small businesses while still promoting health, safety, environmental benefits, and collecting the information required to achieve the purpose of the statute.

Alternative One would have posed less burdensome regulatory requirements on jurisdictions and private persons by eliminating jurisdictional obligations to conduct enforcement over persons and entities subject to their authority. This would result in lower overall cost for jurisdictions as fewer resources for enforcement would be necessary. This would also involve reduced regulatory burdens on private persons due to eliminated exposure to enforcement. It would also be more cost effective to private persons due to reduced fees to offset jurisdictional costs for inspections and infrastructure. However, this alternative also results in fewer benefits since more organic waste would be disposed in landfills, less methane would be reduced, and the statutory mandate of 75 percent reduction in organic disposal by 2025 would not be achieved. It would therefore not be as effective or more effective towards the purpose for which the regulation is proposed.

Alternative One was rejected because although it would be less burdensome to jurisdictions and affected private persons and more cost effective to private persons, it would not be more effective or as effective in carrying out the purpose for which the regulation is proposed because it will not result in meeting the SB 1383 mandate of 75 percent reduction in organic disposal by 2025. If local jurisdictions do not take enforcement actions on regulated entities, i.e., businesses, these entities may not fully participate with local organic waste recycling programs. Historical precedent supports this conclusion; AB 341 and AB 1826 require jurisdictions to offer commercial and organic waste recycling services to their businesses, but neither law requires that jurisdictions undertake enforcement that to ensure that their generators to use the service. In jurisdictions that are voluntarily enforcing these programs, participation rates are substantially higher than those in jurisdictions that have neglected to take enforcement for non-compliance. Based on the results from these jurisdictions, jurisdiction-level enforcement would be much more effective in ensuring the organic recycling goals and methane reductions are met, rather than relying solely on CalRecycle's limited enforcement role.

Alternative Two would have been as effective in carrying out the purpose of SB 1383, but it would have been more burdensome and less cost effective to private persons than the proposed regulations. Alternative Two would include all of the proposed draft regulatory requirements, except that it would exclude provisions that allow for exemptions and waivers from the organic waste collection requirements (i.e., for de minimis generation, physical space constraints, emergencies, low population areas, and rural jurisdictions). CalRecycle estimates that these combined provisions currently allow approximately 5% of organic waste that is disposed to be waived from collection requirements (potentially resulting in the continued disposal of this material). Regardless, both the regulation and this alternative would be expected to achieve the mandated 75% organic waste diversion target in SB 1383.

Alternative Two was rejected because although it would be as effective at achieving the waste diversion target in SB 1383, it would be less cost effective to private persons. Providing collection services in remote areas of the state will increase costs significantly by requiring collection vehicles to travel further distances between collection points, resulting in increased fuel costs for collection and increased distances to transport materials to processing facilities. These costs would be passed on to private persons in the form of fees, thus being less cost effective. Additionally, the increased organic waste recycling would be more costly, with a reduced cost-effectiveness due to the composition of the remaining 25 percent of organic material in the waste stream, which consists of material types that are harder to process and contain more contaminants. Again, these additional processing costs would be passed on to private persons as fees.

Moreover, this alternative would not be less burdensome on private persons as the altered regulatory requirement would apply only to local government and its required provision of collection services by without any effect on regulatory compliance by private persons.

INCORPORATION BY REFERENCE

The following documents are incorporated by reference in the regulation:

1. 40 CFR Part 82, Subpart A, (May 1995).
2. Table A-1 to Subpart A of Title 40 Code of Federal Regulations Part 98 as published in the CFR on 12/11/2014.
3. Part 503, Title 40 of the Code of Federal Regulations, Appendix B, sections (A)(1) and (A)(4), as amended August 4, 1999.
4. ASTM D6400 sections 5.1 through 6.4.2 standard for compostability as published May, 2019.
5. 16 Code of Federal Regulations (CFR) Section 260.12 as published January 1, 2013.

These documents were incorporated by reference because it would be cumbersome, unduly expensive, and otherwise impractical to publish them in the California Code of Regulations (CCR). The documents are lengthy and would add unnecessary additional volume to the regulation. The Code of Federal Regulations (CFR) and ASTM D6400 standard are formal publications reasonably available from commonly known or identified sources, including libraries and online at www.ecfr.gov and www.astm.org.

STATEWIDE SIGNIFICANT ADVERSE ECONOMIC IMPACT ON BUSINESS DETERMINATION

On November 26, 2019 CalRecycle released for public comment an Appendix to the Initial Statement of Reasons (ISOR) originally posted on January 18, 2019, and subsequently

updated in June of 2019. The appendix includes additional analysis of the potential costs and benefits associated with the regulation. The analysis aligns the projected economic cost of the regulation with the tons and material types projected in the Draft Environmental Impact Report produced for the regulations in compliance with the California Environmental Quality Act (CEQA). The Appendix additionally reflects new environmental and economic data that matured after the release of the Standardized Regulatory Impact Assessment in 2018. The Appendix additionally aligns the cost estimates with 2019 estimates of inflation, population and employment. Finally, the Appendix includes estimates of costs and savings resulting from changes to the regulation, as well as changes in methodology for estimating the costs of specific provisions in the regulation in response to comments received through the public rulemaking process. The Appendix to the ISOR found the following:

This analysis reveals that certain businesses in the state may enjoy a competitive advantage over other businesses, while others may face a competitive disadvantage, or have a previous advantage reduced. Any advantage or disadvantage will be an indirect result of the regulations and will be partially attributable to how local governments exercise their discretion in structuring mechanisms used to fund their compliance obligations. Business competitiveness could be impacted by a myriad of factors and decisions made in response to the regulations.

Jurisdictions that currently provide many of the services required by the regulation, may see their businesses become more competitive with other businesses in the state. A business that is located in a jurisdiction that already implements a majority of the requirements of the law likely already pays a higher rate for waste collection services than businesses located in jurisdictions that do not provide these services. These businesses may experience more modest rate increases compared to businesses located in jurisdictions that do not provide any, or only provide a minimal amount, of the additional services required by the regulation.

Businesses that are located in jurisdictions where the level of organic waste recycling services is substantially lower than what the regulations require, may see a potential competitive advantage reduced as their jurisdiction may need to increase collection service rates to a greater degree. Businesses that already incur the costs of higher organic waste collection services, either voluntarily or due to requirements already imposed by their local government will see a potential competitive disadvantage mitigated as businesses located in other jurisdictions will now be required acquire a similar level of service and will begin to share in the costs associated with this form of environmental protection.

Jurisdictions that elect to impose rates on a volumetric basis, or apportion certain costs to specific business types, may create a competitive advantage for certain businesses while others experience a competitive disadvantage. For example, if a jurisdiction charges for waste services on a volumetric basis, businesses that reduce their waste generation may qualify for a lower waste service rate than their competitors, affording them a distinct competitive advantage. Businesses that generate more material may face a competitive

disadvantage if they do not take actions, or are unable, to reduce their own waste generation. Further, if a jurisdiction elects to apportion certain costs to certain businesses, competitive advantages and disadvantages could be created. For example, if a jurisdiction distributes the cost of coordinating its food recovery program exclusively to tier one commercial edible food generators (i.e. supermarkets, grocery stores with more than 10,000 square feet, food service providers and distributors and wholesale food vendors), those businesses may be at a competitive disadvantage to tier two commercial edible food generations (e.g. restaurants and hotels).

The size and location of a jurisdiction can impact rates and ultimately business competitiveness. Larger jurisdictions with a broader base of residential and commercial generators may be able to negotiate more competitive contracts with waste haulers as the value of the contracts will be more lucrative, attracting more competition from the private sector. CalRecycle mitigated this impact through the inclusion of waivers for low population and rural areas. Additionally, jurisdictions that have secured or are located close to existing, or expandable, organic waste recycling infrastructure may be able to negotiate more competitive rates as fuel costs could be reduced. Businesses located in these jurisdictions may experience a competitive advantage as rates could be lower.

The regulations require service to be provided to all commercial businesses in the state. This is projected to impact 741,527 commercial businesses. Specific compliance requirements that will apply to all businesses are requirements to participate in organic waste recycling services provided by the jurisdiction. Additionally, commercial edible food generators as defined in the regulation include: supermarkets, grocery stores with more than 10,000 square feet, food service providers, food service distributors, wholesale food vendors, restaurants with 250 or more seats or 5,000 square feet, hotels and health facilities with onsite food facilities, large venues, large events, state agencies with cafeterias with 250 or more seats or 5,000 square feet, and local education agencies with on site food facilities, will have specific compliance requirements to establish contracts or agreements with food recovery services. Commercial food generators may incur costs securing these arrangements in compliance with the regulation.

Jurisdictions will incur costs to comply with the minimum requirements to provide services to these businesses and oversee their compliance with the direct regulatory requirements. These costs are likely to be passed through to businesses in the form of increased rates or fees for waste collection services provided by the jurisdiction.

Finally, as noted above, CalRecycle revised economic modeling to assume that the costs associated with the regulation will be partially absorbed by businesses (rather than all costs being passed through to consumers), which would result in higher operating costs. Higher operating costs serve to make these firms less competitive, driving down exports and overall sales, all else being held equal. This effect is modeled with the production cost policy variable in the REMI model, and 50 percent of all costs were modeled with the production cost policy variables.

Specific estimates of cost impacts to businesses are included in the Appendix to the ISOR.

To achieve the statutory targets, the *Final Regulations* include four core elements: 1) Mandatory organic waste recycling services, 2) Food recovery programs and requirements 3) Recycled product procurement targets, and 4) Oversight and enforcement. Each of these elements is essential to achieving the targets required by law. These key regulatory provisions were carefully amended throughout the rulemaking processes to accommodate robust public feedback.

Mandatory Organic Waste Recycling Services

The foundational requirement of the SB 1383 rulemaking is the requirement for each jurisdiction, and any hauler acting on behalf of a jurisdiction, to provide organic waste recycling services to all generators (residential and commercial). Absent a requirement to collect and recycle residential waste (40 percent of total waste generation) and commercial waste (60 percent of total waste generation), the state cannot achieve the statutory targets.

The regulations specify that the recycling services provided must either: (1) separate organic waste from other materials at the point of collection (source-separated curbside collection), or (2) collect organic waste with garbage and other wastes and separate the material for recycling at a receiving facility (mixed waste collection). Source-separated collection services require that residents and businesses keep organic waste clean and separate from non-organic waste (i.e. through placement in a separate container), preserving the recyclability of the organic waste. Mixed waste collection allows organic waste to be mixed with non-organic material for collection and requires a receiving facility to successfully remove, decontaminate, and recycle organic waste collected by these services.

Mixed waste collection services exist for traditional recyclables in several jurisdictions; however, when organic waste is mixed with non-organic waste the recyclability of both materials is compromised, the recycling options become increasingly limited, and the value of at least one material can be lost (e.g., broken glass mixed in with food waste can render each material exceedingly more expensive and technically challenging to recover). In recognition of this, CalRecycle originally proposed prohibiting the implementation new mixed waste collection services after 2022 and requiring all new services to implement source-separated curbside collection as a means of ensuring that collected organic waste would be kept clean and recyclable.

Public stakeholders engaged in the rulemaking process expressed concern regarding the proposed elimination of the option of providing mixed waste collection services for

organic waste. Stakeholders argued that this would unnecessarily limit innovation and flexibility, increase costs, and be overly burdensome. In response to stakeholder concerns, CalRecycle replaced the prohibition on new mixed waste collection services with a performance standard for mixed waste collection services. Specifically, the *Final Regulations* allow jurisdictions to provide mixed waste collection services if the material collected in these systems is transported to facilities that recycle at least 75 percent of the organic content collected in these systems by 2025. The performance standard allows for flexibility, innovation, and cost savings, while preserving the integrity of the regulations by ensuring that they are designed to meet the statutory mandate.

Food Recovery Programs and Requirements

An integral part of achieving the 75 percent organic waste reduction target, and an explicit statutory requirement of SB 1383 is the inclusion in the regulations of “requirements intended to meet the goal that not less than 20 percent of edible food that is currently disposed of is recovered for human consumption by 2025.” This requirement is a novel mandate for a government agency to implement through regulations. To achieve this target CalRecycle included specific requirements for jurisdictions, commercial businesses, and food recovery organizations and services in the *Final Regulations*.

The regulations require specific commercial businesses engaged in food distribution and food service (e.g. grocery stores and large restaurants) to establish formal arrangements with food recovery organizations and services capable of recovering and distributing the businesses’ excess food to people in need. In response to stakeholder feedback regarding uncertainty about existing food recovery capacity, CalRecycle included provisions in the regulation to phase-in the requirements for commercial businesses and to require jurisdictions to estimate existing food recovery capacity and take action to remedy shortfalls in local capacity. For example, larger commercial businesses that are more likely to already have established relationships with food recovery services for some of their food (e.g. grocers) are required to comply with the regulations in 2022, while smaller businesses that typically handle prepared food that is more difficult to recover (e.g. restaurants) will have until 2024 to comply.

Recycled Product Procurement Targets

Consistent with SB 1383, the *SLCP Strategy*, and the *2017 Integrated Energy Policy Report*, the regulations require local jurisdictions to close the recycling loop by procuring the products of organic waste recycling. These requirements were developed in response to considerable stakeholder feedback stating that absent markets for the products of organic waste recycling (e.g. compost and renewable natural gas) the state cannot expect to achieve the organic waste reduction targets. In response, CalRecycle

extensively consulted with The California Air Resources Board and the California Energy Commission to determine the scope of its authority to include market tools in the regulations. This resulted in the development of limited, but critical procurement requirements.

The regulations establish procurement targets requiring jurisdictions to obtain minimum levels of compost, mulch, renewable natural gas, or electricity derived from recycling California generated organic waste. Jurisdictions are assigned recycled product procurement targets that are linked to the amount of organic waste they generate. The procurement target is met through the jurisdiction's use of eligible recycled products. The minimum procurement requirements will pull three million tons of organic waste through recycling streams annually (10%-15% of total recycling required annually) and will help guarantee the success of the overall program by establishing a minimum level of market demand.

The procurement requirements were significantly amended throughout the formal rulemaking process in response to stakeholder feedback. Each recycled product includes a conversion factor that translates to a specified amount of organic waste (e.g. 0.58 tons of compost = 1 ton of organic waste). CalRecycle quantified additional conversion factors to allow additional products to count toward the procurement obligations (notably mulch, and electricity were added). These additions provide more options to jurisdictions and make compliance easier and more cost effective. Additionally, CalRecycle exempted small and rural jurisdictions from the procurement requirements through 2027. Finally, the regulations include a safety valve provision that allows jurisdictions, under specific circumstances, to lower their procurement obligation if the target exceeds their demand.

Oversight and Enforcement

The *Final Regulations* include an enforcement structure where jurisdictions oversee day-to-day compliance of residents, businesses, and haulers under their authority (e.g. ensuring that businesses are subscribed to organic waste recycling services) and CalRecycle oversees jurisdiction compliance. This approach mirrors the delegated enforcement approach used by CalRecycle in the waste tire hauling and solid waste facility programs, where primary oversight is conducted at the local level (typically by county offices of environmental health) with CalRecycle concurrence.

Delegated Oversight and Enforcement

The structure of delegated local oversight, whereby local entities conduct primary oversight and the state provides secondary oversight, is a proven mechanism for ensuring compliance with existing environmental regulations. The oversight structure in the *Final Regulations* is modeled on existing facility oversight conducted by Local

Enforcement Agencies (LEAs) and Tire Enforcement Agencies (TEAs). In these programs compliance with state requirements consistently exceeds 90 percent, and fewer than two percent of violations require escalated enforcement beyond a notice of violation or notice to correct.

Within this structure of delegated enforcement the specific oversight, monitoring, and enforcement requirements that apply to jurisdictions in the *Final Regulations* are modeled on enforcement ordinances adopted and implemented by jurisdictions that enjoy the highest rates of businesses in compliance with organic waste recycling requirements (as measured by business participation in existing organic waste recycling requirements). CalRecycle modeled the local enforcement provisions (monitoring, noticing processes, and penalties) jurisdictions must implement on the provisions included in the organic waste recycling and enforcement ordinances adopted by the City and County of San Francisco and the Alameda County Waste Management Authority. These jurisdictions enjoy the highest business compliance rates with more than 75 percent of their businesses subscribed to organic waste recycling service.

Numerous stakeholders argued that provisions requiring jurisdictions to monitor compliance and take enforcement for non-compliance are unnecessary and should be removed from the *Final Regulations*. Under existing law (AB 1826 (Chesbro, Chapter 727, Statutes of 2014)) certain commercial businesses are already required to subscribe to organic waste recycling services and jurisdictions are required to *offer* organic waste recycling to those businesses. However, that law does not currently require jurisdictions to take enforcement against businesses that fail to obtain service (the state is not authorized to take enforcement against businesses under AB 1826). The vast majority of jurisdictions have chosen not to take enforcement against any businesses that fail to have service as required by law. These jurisdictions reported that fewer than 25 percent of their businesses are in compliance with existing organic waste recycling requirements.

The compliance rates achieved in the jurisdictions that CalRecycle modeled the delegated local enforcement provisions on represent the minimum compliance levels necessary to meet the statewide organic waste reduction targets. Compliance levels in jurisdictions that lack enforcement mechanisms reveal that failure to include mandatory jurisdiction oversight and enforcement in the regulation is incompatible with the state's ability to achieve its organic waste reduction and climate change goals.

State Oversight and Enforcement

CalRecycle is responsible for conducting oversight and ensuring compliance across the state. CalRecycle's oversight is focused on cities and counties, and entities that are not subject to the solid waste authority and oversight of cities and counties. CalRecycle's

oversight, enforcement, and penalty procedures, included in the *Final Regulations* are modeled on existing environmental regulations enforced by CalRecycle.

The regulations require CalRecycle to follow noticing protocols, penalty factors, and administrative procedures that are standard practices for remedying violations of environmental regulations. The structure of the enforcement articles in the *Final Regulations* requires CalRecycle to issue notices for violations, provide a time for the regulated entity to cure the violation or violations, and in the event of an entity's failure to comply with the regulations within the established timeline, levy fines based on a transparent set of factors.

Jurisdiction representatives requested that in lieu of the proposed enforcement articles in the *Final Regulations*, CalRecycle adopt and apply the "Good Faith Effort" compliance model that applies to jurisdiction compliance with the requirements of AB 939 (Sher, Chapter 1095, Statutes of 1989). This oversight model was specifically designed to evaluate whether a jurisdiction implemented self-selected programs to achieve a unique jurisdiction diversion target. Unique jurisdiction diversion and recycling targets and by extension self-selected programs, do not exist in the statutory construction of SB 1383. The statute specifically precludes CalRecycle from setting unique diversion targets for individual jurisdictions. The statute instead requires CalRecycle to adopt regulations that place objective standards and requirements on regulated entities (including but not limited to jurisdictions) necessary to achieve a *statewide* recycling target.

The use of "Good Faith Effort" compliance as designed for AB 939's jurisdiction specific targets is inconsistent with SB 1383's statewide targets which apply to more than just jurisdictions. Employing this standard would not comply with statutory direction. The Legislature specifically struck requirements from the legislation that required the use of "good faith effort" (SB 1383 Lara, Statutes of 2016, Version 95, amended in Assembly August 31, 2016; SB 1383, Lara, Chapter 395 Statutes of 2016). This action renders consideration of an approach that employs the AB 939 Good Faith Effort standard, inconsistent with legislative intent. As such, wholesale adoption of that model is not appropriate for the SB 1383 regulations.

STAKEHOLDER ENGAGEMENT FEBRUARY 2017- DECEMBER 2019

Informal Rulemaking Process

CalRecycle initiated an extensive public stakeholder engagement process in February of 2017 to solicit feedback on proposed policies and requirements to meet the SB 1383 targets in a manner that complies with the statutory construction. This process included a total of 13 public stakeholder workshops across the state over a period of nearly 18

months. CalRecycle conducted nine scoping workshops to vet regulatory concepts. Following the scoping workshops, CalRecycle conducted four workshops to discuss drafts of regulatory text.

CalRecycle presented an initial draft of regulatory text in October of 2017. Following the workshops, CalRecycle staff met extensively with stakeholders across the state to solicit feedback on all aspects of the initial draft of the regulations. In May of 2018 CalRecycle presented a second informal draft of regulatory text. CalRecycle released a Standardized Regulatory Impact Assessment in November of 2018 assessing the estimated cost and benefits of compliance with the proposed rulemaking. In December of 2018 CalRecycle concluded the informal rulemaking process and informally shared the first draft of formal regulatory text prior to submitting the text to the Office of Administrative Law.

Formal Rulemaking Process

The formal rulemaking process began January 18, 2019. CalRecycle staff endeavored to provide a thorough and robust process with ample time for stakeholder comments and engagement. Throughout the formal rulemaking period CalRecycle held five individual comment periods, two formal hearings and a public workshop. The combined comment periods on the regulatory text, the Environmental Impact Report, and the rulemaking record provided stakeholders more than 150 days to comment on the regulatory text or associated rulemaking documents.

Formal Regulatory Text and Rulemaking Documents

CalRecycle released three drafts of regulatory text for the public to provide comments and make recommendations. CalRecycle also provided an updated cost assessment and provided stakeholders an opportunity to comment on the updated figures as well as the supporting documents in the rulemaking record.

- *First Formal Draft*; January 18, 2019. Comment period concluded March 4th; 268 letters received. Public hearing held March 12, 2019.
- *Second Formal Draft*; June 17, 2019. Comment period concluded July 17th; 145 comment letters received. Presentation on regulatory text held June 18, 2019.
- *Third Formal Draft*; October 2, 2019. Comment period concluded on October 18th; 75 comment letters received.
- *Rulemaking Record Update* (including an updated assessment of costs and benefits associated with the *Final Regulations*); November 26, 2019. Comment period concluded December 13th; 8 comment letters received.

Throughout the rulemaking process, CalRecycle staff made substantial changes to the regulations in response to stakeholder feedback received through hearings and formal comment periods. CalRecycle sought to accommodate all proposed regulatory changes that were compatible with achieving the targets and the overall statutory requirements

governing the design of the regulation. CalRecycle rejected proposals and changes that would have compromised the state's ability to meet the statutory mandate.

The *Third Formal Draft* of regulatory text released in October included the final substantive changes to the rulemaking text. The *Final Regulations* (attachment 3) staff is proposing to submit to the Office of Administrative Law includes minor technical changes from the *Third Formal Draft*. A version of the *Final Regulations* denoting the non-substantial and grammatical changes and corrections from the *Third Formal Draft* is also attached (attachment 4) for reference. Per Section 11346.8(c) of the Government Code, the changes made since the conclusion of the final comment period are non-substantial or solely grammatical in nature and therefore do not require an additional notice and comment period.

STANDARDIZED REGULATORY IMPACT ASSESMENT

Attached in Binder 1, Tab 8 APPENDIX A COST UPDATE

Attached in Binder 1, Tab 9

FINAL STATEMENT OF PURPOSE AND NECESSITY

See Binder 4, Tab 3