



# FINAL STATEMENT OF REASONS

Compostable Materials and Transfer/Processing Regulations  
DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY (CALRECYCLE)

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~~INITIAL~~FINAL STATEMENT OF REASONS

September ~~2014~~2015

Title 14: Natural Resources

Division 7: ~~California Integrated Waste Management Board~~Department of Resources  
Recycling and Recovery

Chapter 1: General Provisions

Chapter 3: Minimum Standards for Solid Waste Handling and Disposal

Chapter 3.1: Compostable Materials Handling Operations and Facilities 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 Facility Permits; Loan Guarantees.

Title 27: Appendix 1 – Joint Permit Applicant Form and Instructions.

**STANDARDIZED REGULATORY IMPACT ASSESSMENT**

See attached.

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

Department relied upon the following in proposing the adoption of these revised regulations:

1. U.S. Environmental Protection Agency sewage sludge regulations (Code of Federal Regulations, Title 40, Part 503 – Standards for the Use or Disposal of Sewage Sludge)
2. Ventura County Ordinance Code Pertaining to the Regulation of Solid Waste (Ordinance No. 4423)  
<http://www.ventura.org/rma/envhealth/technical-services/solid-waste/pdf/Ord.4423.pdf>
3. Program Environmental Impact Report for Anaerobic Digestion Facilities  
<http://www.calrecycle.ca.gov/SWFacilities/Compostables/AnaerobicDig/PropFnlPEIR.pdf>
4. The Department developed white papers on:
  - a. Food Waste Composting  
<http://www.calrecycle.ca.gov/LEA/regs/Review/FoodWastComp/FoodWastcomp.pdf>
  - b. Agricultural Land Application of Compostable Material  
<http://www.calrecycle.ca.gov/LEA/regs/Review/CompLandApp/CompLandApp.pdf>
  - c. Compostable Materials Storage Volume Limitations

<http://www.calrecycle.ca.gov/LEA/regs/Review/CompstStorag/CompStorag2.pdf>

5. The Department held 16 workshops from October 2011 through May 2013 to obtain stakeholder input:

<http://www.calrecycle.ca.gov/Laws/Rulemaking/Compost/default.htm>

The Department developed the proposed regulations in August 2013 based on oral and written comments from stakeholders:

<http://www.calrecycle.ca.gov/Laws/Rulemaking/Compost/DraftText3.pdf>

<http://www.calrecycle.ca.gov/Laws/Rulemaking/Compost/SWFPAApp2.pdf>

**Note: All studies, reports, or documents referenced in this section are available on the compact disc in the sleeved folder immediately following this Final Statement of Reasons.**

### **UPDATED INFORMATIVE DIGEST**

The existing California Integrated Waste Management Act (Act), Public Resources Code (PRC) §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. The proposed rulemaking revises existing regulations and develops new regulations to ensure that solid waste facilities handle compostable materials in a manner that protects public health, safety, and the environment. The proposed regulations:

1. Clarify several compostable material feedstock definitions and the types of operations and facilities that can accept these feedstocks.
2. Revise the maximum concentrations of metals allowed in compost to reflect changes adopted by US EPA.
3. Provide Enforcement Agencies with discretion to authorize temporary storage of additional material at compostable materials handling operations.
4. Revise Enforcement Agency inspection frequency requirements for solid waste operations to ensure consistency throughout Title 14.
5. Provide operators and Enforcement Agencies with additional mechanisms to address chronic odor at compostable materials handling facilities and operations.
6. Establish criteria for land application of compostable materials and add pathogen and metal limits for compostable materials when applied to land.
7. Require compost products to meet a 0.5% physical contaminant limit by weight and set the same standard for compostable materials and digestate when applied to land.
8. Develop regulations for compostable materials at in-vessel digestion operations and facilities.

9. Clarify the term “permitted maximum tonnage” on the solid waste facility permit application.

10. Clarify requirements for composting at non-commercial sites, such as community gardens and schools.

The Department held 18 workshops from October 2011 through March 2015 to obtain stakeholder input on compostable material handling issues and developed the proposed regulations based on this stakeholder input.

### **MANDATED USE OF SPECIFIC TECHNOLOGIES OR EQUIPMENT**

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

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

For all the changes proposed in these regulations, the following statement applies:

Alternatives to the proposed regulations have been considered, including a “no-action” alternative. The Department has determined that: 1) no alternative would be less burdensome and equally effective in achieving the purposes of the regulation in a manner that ensures full compliance with the authorizing statute or other law being implemented and made specific by the proposed regulations; and 2) no alternative would lessen adverse economic impact on small businesses while protecting human health, safety, and the environment. 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 and environmental benefits and collecting the information required by statute.

Furthermore, the Department has determined that no alternative considered would be: 1) more effective in carrying out the purpose for with the regulation is proposed; 2) as effective and less burdensome to affected private persons than the adopted regulation; or 3) more cost effective to affected private persons and equally effective in implementing the statutory policy or other provision of law. These determinations are based, in part, upon the Standardized Regulatory Impact Assessment (attached), and, in part, upon the benefits described in the Problem Addressed By And Benefits Of Regulations section below.

### **INITIAL DETERMINATION THAT THE ACTION WILL NOT HAVE A SIGNIFICANT ADVERSE ECONOMIC IMPACT ON BUSINESS**

Based on the attached Standardized Regulatory Impact Assessment the Department has made the initial finding that these regulations will not have a significant adverse economic impact on business.

### **LOCAL MANDATE AND FISCAL DETERMINATIONS**

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.

Some local agencies will incur costs associated with these regulations but these agencies will be fully financed from fees and other charges authorized by Public Resources Code sections 40057, 40059, 41903, 43213, and 44006.

### **RESPONSE TO COMMENTS**

Summaries of each objection or recommendation made regarding the specific adoption, amendment, or repeal proposed, together with an explanation of how the proposed action has been changed to accommodate each objection or recommendation, or the reasons for making no change, are located in Volume II of this rulemaking file and are hereby incorporated by reference.

### **DUPLICATION OR CONFLICTS WITH CODE OF FEDERAL REGULATIONS**

The Department has made the finding that no unnecessary duplication or conflict exists between the proposed regulations and federal regulations contained in the Code of Federal Regulations because federal law or regulations do not contain comparable requirements.

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

The Department has found that the requirements for specific reports are necessary for the health, and safety and welfare of the people of the state because it will help to ensure that the requirements of these regulations are met and adequately monitored.

### **PROBLEM ADDRESSED BY AND BENEFITS OF REGULATIONS**

The central purpose of the proposed regulations is to protect public health, and safety, and the environment by more effectively regulating solid waste facilities that handle compostable materials. The proposed regulations modify the existing Compostable Material Handling Operations and Facilities Regulatory Requirements by: clarifying several feedstock definitions and the types of operations and facilities that can accept these materials; revising the maximum concentrations of metals allowed in compost to reflect changes adopted by US EPA; providing Enforcement Agencies with discretion to authorize temporary storage of additional material; revising Enforcement Agency inspection frequency language to ensure consistency throughout Title 14; providing operators and Enforcement Agencies with a mechanism to address chronic odor complaints and identify sources of odor; establishing criteria for safe land application of compostable material; requiring compost products to meet a 0.45% physical contaminant limit by dry weight; and clarifying small-scale composting requirements at sites, such as community gardens and schools.

The proposed regulations provide a standardized regulatory framework for in-vessel digestion activities. Currently, in-vessel digestion activities are subject to either existing Transfer/Processing Operations and Facilities Regulatory Requirements or Compostable Material Handling Operations and Facilities Regulatory Requirements, depending on the nature of the feedstock and how it is handled. The proposed regulations combine portions of the transfer/processing and compostable material handling requirements into a stand-alone set of in-vessel digestion regulations designed to reduce the amount of pollutants, pathogens, and vectors in the environment, which will have marginal impacts on in-vessel digestion activities compared to existing regulations.

The proposed regulations also clarify permitted maximum tonnage on the application for solid waste facility permit application/permits/waste discharge requirements (CalRecycle E-1-77 form).

The principal benefit of the proposed regulations is protecting public health, and safety and the environment. Requiring compost products to meet ~~a 0.1%~~ physical contaminant ~~limit~~limits will reduce litter and minimize the amount of plastic entering surface water and the ocean while creating new jobs and increasing the market value of compost. Establishing criteria for safe land application of compostable material, digestate, and compost will reduce litter and minimize the amount of plastic entering surface water and the ocean and improve food safety and animal health by reducing toxic metals, disease-causing organisms, physical contaminants, and invasive/noxious species in compostable material. Other benefits of the proposed regulations include minimizing odors at compostable material handling and in-vessel digestion facilities; decreasing greenhouse gases, air pollution, and long-distance transportation of organic material by facilitating small-scale composting; providing clarity to the regulated community and regulators. Finally, the regulations will ensure safe operations and facilities to handle organic material diverted as the result of California's goal to source-reduce, recycle, or compost 75% of the solid waste generated in the State by 2020.

The new, ~~"stand-alone"~~ In in-vessel digestion portion of the proposed regulations will establish a clear regulatory framework for the digestion of organic material. Digesting ~~this~~organic material will decrease greenhouse gas generation and increase production of biofuels/bioenergy.

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

### **Title 14**

### **Division 7**

### **Chapter 1. General Provisions**

### **Article 1. Definitions**

#### **§ 17017. Definitions. (a) and (b)**

These definitions are necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board, effective January 1, 2010.

### **Chapter 3. Minimum Standards for Solid Waste Handling and Disposal**

### **Article 5.6. Nonhazardous Petroleum Contaminated Soil Operations and Facilities Regulatory Requirements**

#### **§ 17362.2. Contaminated Soil Transfer/Processing Operations.**

Current regulatory language for enforcement agency inspection at operations under the Enforcement Agency Notification tier is not entirely consistent. These revisions are necessary to clarify and standardize the requirement for enforcement agency inspections, which will assist operators understand the requirements that apply to their sites. The flexibility in inspection frequency provided by this section is necessary to prevent unnecessary regulation of operations that pose minimal risk to the public health and safety and the environment.

## **Article 5.8. Nonhazardous Ash Regulatory Tier Requirements**

### **§ 17377.2. Nonhazardous Ash Transfer/Processing Operations.**

#### Subdivision (d)

Current regulatory language for enforcement agency inspection at operations under the Enforcement Agency Notification tier is not entirely consistent. These revisions are necessary to clarify and standardize the requirement for enforcement agency inspections, which will assist operators understand the requirements that apply to their sites. The flexibility in inspection frequency provided by this subdivision is necessary to prevent unnecessary regulation of operations that pose minimal risk to the public health and safety and the environment.

## **Article 5.9. Construction and Demolition and Inert Debris Transfer/Processing Regulatory Requirements**

### **§ 17381.1. Activities That Are Not Subject to the Construction and Demolition/Inert Debris Regulatory Requirements.**

#### Subdivision (b)(1)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

#### Subdivisions (d)(2)

Allowable storage time of construction and demolition and inert debris is reduced from one year to 90 days. This is necessary to protect the public health, and safety and the environment by ensuring materials are being removed in a timely manner to reduce the incidents of large volumes of materials accumulating and being abandoned.

#### Subdivision (d)(3)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

#### Subdivision (e)(2)

Allowable storage time of inert debris that has been processed and sorted for resale, or reuse is reduced from 18 months to 12 months. This is necessary to protect the public health, and safety and the environment and to reduce the incidents of large volumes of materials accumulating and being abandoned.

#### Subdivision (e)(4)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

#### Subdivision (f)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

#### Subdivision (g)(1)

Requiring the owner or operator to provide evidence to the enforcement agency that the stored debris being accumulated for viable reuse is necessary to protect the public health and safety

and the environment and to reduce the incidents of large volumes of materials accumulating and being abandoned.

**§ 17383.3. C&D Wood Debris Chipping and Grinding Operations and Facilities.**

Subdivisions (a)(1) through (a)(5)

Current regulatory language for enforcement agency inspection at operations under the Enforcement Agency Notification tier is not entirely consistent. These revisions are necessary to clarify and standardize the requirement for enforcement agency inspections, which will assist operators understand the requirements that apply to their sites. The flexibility in inspection frequency provided by this subdivision is necessary to prevent unnecessary regulation of operations that pose minimal risk to the public health and safety and the environment. Subdivision (a) is reorganized using numbers (1) through (5) to make requirements of this subdivision easier to read.

**§ 17383.4. Small Volume Construction and Demolition/Inert Debris Processing Operations.**

Current regulatory language for enforcement agency inspection at operations under the Enforcement Agency Notification tier is not entirely consistent. These revisions are necessary to clarify and standardize the requirement for enforcement agency inspections, which will assist operators understand the requirements that apply to their sites. The flexibility in inspection frequency provided by this subdivision is necessary to prevent unnecessary regulation of operations that pose minimal risk to the public health and safety and the environment.

**§ 17383.7. Inert Debris Type A Processing Operations.**

Subdivision (f)

Current regulatory language for enforcement agency inspection at operations under the Enforcement Agency Notification tier is not entirely consistent. These revisions are necessary to clarify and standardize the requirement for enforcement agency inspections, which will assist operators understand the requirements that apply to their sites. The flexibility in inspection frequency provided by this subdivision is necessary to prevent unnecessary regulation of operations that pose minimal risk to the public health and safety and the environment.

**Article 5.95. Construction and Demolition Waste and Inert Debris Disposal Regulatory Requirements**

**§ 17388.3. Inert Debris Engineered Fill Operations.**

Subdivision (b)

Current regulatory language for enforcement agency inspection at operations under the Enforcement Agency Notification tier is not entirely consistent. These revisions are necessary to clarify and standardize the requirement for enforcement agency inspections, which will assist operators understand the requirements that apply to their sites. The flexibility in inspection frequency provided by this subdivision is necessary to prevent unnecessary regulation of operations that pose minimal risk to the public health and safety and the environment.

**Article 6.0. Transfer/Processing Operations and Facilities Regulatory Requirements**

**§ 17403.1. Excluded Operations.**

Subdivision (a)(8)

This subdivision clarifies that a Publicly Owned Treatment Works (POTW) Treatment Plant that receives vehicle-transported solid waste that is an anaerobically digestible material for the purpose of anaerobic co-digestion with POTW Treatment Plant wastewater, in accordance with § 17896.6(a)(1), is not a transfer operation or facility.

**§ 17403.2. Sealed Containers Transfer Operations.**

Current regulatory language for enforcement agency inspection at operations under the Enforcement Agency Notification tier is not entirely consistent. These revisions are necessary to clarify and standardize the requirement for enforcement agency inspections, which will assist operators understand the requirements that apply to their sites. The flexibility in inspection frequency provided by this subdivision is necessary to prevent unnecessary regulation of operations that pose minimal risk to the public health and safety and the environment.

**§ 17403.3. Limited Volume Transfer Operations.**

Current regulatory language for enforcement agency inspection at operations under the Enforcement Agency Notification tier is not entirely consistent. These revisions are necessary to clarify and standardize the requirement for enforcement agency inspections, which will assist operators understand the requirements that apply to their sites. The flexibility in inspection frequency provided by this subdivision is necessary to prevent unnecessary regulation of operations that pose minimal risk to the public health and safety and the environment.

**Article 6.2 Operating Standards**

**§ 17409.2 Sanitary Facilities**

These revisions are necessary to clarify the enforcement agency is not authorized to regulate other local, state, or federal requirements.

**Chapter 3.1. Compostable Materials Handling Operations and Facilities Regulatory Requirements**

**Article 1. General**

**§ 17852. Definitions.**

Subdivision (a)(4.5)

The new definition for Agricultural by-product material is necessary to specify the types of materials that if applied to land under the oversight of the State Water Resources Control Board or a Regional Water Quality Control Board are not subject to the land application requirements of § 17852(a)(24.5)(A). These requirements do not apply to the final deposition agricultural by-product material spread on land as authorized by the State Water Resources Control Board or a Regional Water Quality Control Board pursuant to Waste Discharge Requirements, a Waiver of Waste Discharge Requirements, a Resolution, or "other issued requirements from the State Water Resources Control Board or Regional Water Quality Control Board having jurisdiction.

Subdivision (a)(5)

A revision of the "agricultural material" definition is necessary ~~because the current definition is not clear relative to add clarity~~ to the term "processing" ~~used in the current definition.~~ The revision clarifies that agricultural material, with the exception of grape pomace or material generated during nut or grain hulling, shelling, and processing, is separated at the point of generation and has not been processed in a way that alters its essential character as a waste

resulting directly from the conduct of an agricultural activity. This clarification will reduce the likelihood of odorous materials, such as food processing waste, being composted at agricultural material composting operations, which will protect the public health and safety and the environment.

Subdivision (a)(9)

A revision is necessary to clarify that biosolids includes residual solids resulting from the co-digestion of anaerobically digestible material with sewage sludge.

Subdivision (a)(12)(C) through (EF)

§ 17852(a)(38.5) defines Vegetative Food Material Composting Facility in regulation. The inclusion of this type of composting facility is necessary in this subdivision to clarify that these types of facilities are subject to the compostable material handling regulations. Biosolids composting operations at POTWs are included in the list as they are subject to the composting material handling regulations as described in § 17859.1.

Subdivision (a)(13.5)

“Digestate” is defined in § 17896.2(a)(~~4214~~), and it is necessary to also include the definition in this Chapter to clarify that digestate intended to be composted can only be handled at a facility that has obtained a Compostable Materials Handling Facility Permit. The one exception to this requirement is the composting of digestate resulting from the co-digestion of anaerobically digestible material with wastewater at a Publicly Operated Treatment Works. This digestate meets the definition of biosolids, therefore, the requirements of § 17859.1 (Biosolids Composting at POTWs) would apply. Digestate may be odorous and attract vectors, and requiring this material to be composted at a Compostable Material Handling Facility is necessary to protect the public health, and safety and the environment.

Subdivision (a)(15)

This revision is necessary to clarify that the “Disposal of compostable materials and or digestate” definition ~~in this Chapter refers~~does not include activities that may appear to the disposal ~~of compostable material, not other solid waste such as tires, electronic waste, etc.~~

Subdivision (A)1.

This revision is necessary to clarify that the final deposition of compostable material and/or digestate onto land is disposal unless specifically excluded in § 17855.

Subdivision (A)2.

Reducing the storage or stockpiling time from six months to 30 days is necessary to protect the public health, and safety and the environment. Compostable material should be used (e.g. applied, tilled) within 30 days to prevent nuisance conditions such as odor, dust, vector attraction, etc. Specifying a volume limit on the amount of compostable material that can be stored or stockpiled (200 cubic yards) establishes a lower bound under which public health, and safety and environment should be minimal.

Subdivision (A)3.

Specifying a volume limit (200 cubic yards) and time limit (< 12 months) on agricultural material, green material, and compost that can be stored or stockpiled on land zoned for agricultural uses is necessary to protect the public health, and safety and the environment. The Department believes it is reasonable to provide the enforcement agency with flexibility to allow storage time of more than 12 months if the longer storage time will not adversely affect the public health and safety and the environment.

Subdivision (B)1.

This subdivision is necessary to clarify that “disposal” does not include the use of compostable material for beneficial reuse at a solid waste landfill. The specific reference to alternative daily cover at a solid waste landfill is deleted since alternative daily cover is considered a type of beneficial reuse pursuant to PRC § 41781.3.

Subdivision (B)2.

This restructuring of this subdivision by deleting reference to alternative daily cover is necessary because it is addressed in Subdivision (B)1. and moving mine reclamation from § 17855(a)(9) to this subdivision to specify that it is not a disposal activity.

Subdivision (B)3.

The deletion of the definition of land application from this subdivision is necessary because it was moved to § 17852(a)(24.5).

Subdivision (B)4.

The subdivision is necessary to clarify that use of compost, compostable material, biosolids, and agricultural by-product materials as described in § 17852(a)(24.5)(B) is not considered disposal.

Subdivision (C)

This subdivision is revised to clarify the relationship between the enforcement agency and a person handling compostable material in the event that disposal on-site is suspected. This is necessary to protect the public health and safety and the environment.

Subdivision (D)

This revision is necessary to clarify that definition of disposal in this Chapter refers to compostable material, not other solid waste such as tires, electronic waste, etc.

Subdivision (a)(16)

This subdivision is revised to clarify “dry weight basis” and “dry weight” have the same meaning.

Subdivision (a)(19)

Vegetative food material and mixed material are added to definition of feedstock to clarify that both material types are considered feedstock and subject to the Compostable Materials Handling regulations. The term “organic” is deleted in reference to compostable material because all compostable material is organic and thus the term is redundant. The term “digestate” is added to the definition of “feedstock” for clarity.

Subdivision (a)(19.5)

“Film plastic” is a new definition and is necessary for the purpose of determining the amount of physical contamination for compostable material and/or digestate pursuant to § 17868.3.1 and compost pursuant to § 17896.61 for determining compliance with land application requirements pursuant to § 17852(a)(24.5).

Subdivision (a)(20)

The revision of the “Food Material” definition is necessary to more clearly differentiate food material from other types of solid waste. The changing of the section number of the Health and Safety Code definition of food facilities is from § 113785 to § 113789 is necessary to reflect the correct statutory citation to the Health and Safety Code. It is necessary to add that food waste from “food processing establishments,” as defined in Health and Safety Code § 111955, to

clarify that this material is food material, and consequently, a Compostable Material Handling Permit is required to compost this material. The statement that food material does not include material specified in the California Food and Agricultural Code and regulations adopted pursuant thereto is necessary to distinguish waste types that are under the jurisdiction of the California Department of Food and Agriculture.

#### Subdivision (A)

“Vegetative Food Material” is a new definition and a subcategory of food material. The definition is necessary to distinguish plant-based food material from other food material. –Vegetative food material poses less risk to public health, and safety, and the environment than food material that is of animal origin or contains salts, preservatives, fats or oils, and consequently, the composting of vegetative food material is allowed in the Registration Tier as specified in § 17857.2. Vegetative food material contains no greater than 1.0 percent of physical contaminants by dry weight and meets the requirements of § 17868.5.

#### Subdivision (a)(21)

The “Green Material” definition is revised and clarified to differentiate it from other types of plant materials, such as food material and vegetative food material and to clarify that tree trimmings and wood waste from silviculture and manufacturing are also green material. Vegetative food material is a new definition and mixed material is a revised definition, and consequently, it is necessary to clarify that these types of materials are not green material. Many agricultural materials are plant-based materials and meet the definition of green material, therefore, they can be handled as either agricultural material or green material.

#### Subdivision (a)(24.5)

This definition is necessary to specify that “Land Application” is the final deposition of compostable material and/or digestate spread on land as stipulated in Subdivisions (A) or (B) and to clarify the prior definition of “land application” that was in (a)(15)(C).

Agricultural by-product materials are not subject to land application requirements pursuant to § 17852(a)(24.5), however, the handling of these materials are subject to compostable material handling requirements, unless these materials are handled at the site at which the materials are generated and no materials are received from outside sources.

#### Subdivision (A)

This subdivision is necessary to clarify that land application is the final deposition of compostable material and/or digestate spread on any land, including land zoned only for agricultural uses, under the conditions specified in (A)1. through (A)5.

#### Subdivision (A)1.

This subdivision specifies that the compostable material cannot contain more ~~than 0.4~~than 0.5% by dry weight of physical contaminants greater than 4 millimeters (no more than 20% by dry weight of this 0.5% shall be film plastic greater than 4 millimeters) as specified in § 17868.3.1. This ensures the compostable material that is land applied does not contain excessive amounts of physical contaminants which is necessary to protect public health and safety and the environment. The limit on the percentage of physical contaminants is consistent with nationwide trends (the states of Massachusetts, Minnesota, Montana, Ohio, Washington, and Wisconsin, as well as the United Kingdom, have limits on physical contaminants). In California, the Department of Transportation’s (Caltrans) Revised Compost Nonstandard Specification 21-1.02M, calls for physical contaminants (plastic, glass, and metal) to be less the 0.5% by dry weight.

“Glass shards (4-mm to 13-mm) can pose a human and animal hazard with unprotected exposure or through direct ingestion. Metal fragments can pose the same hazard, and could be a potential source of trace elements upon interaction with soil. Hard plastic can be an aesthetic concern and in large quantities may affect physical properties of a compost-amended soil, (e.g., soil coloring, heat retention, drainage).” [Test Methods for the Examination of Composting and Compost, Method 03.06 Glass Shards, Metal Fragments and Hard Plastic, pg. 03.06-1 - U.S. Department of Agriculture/U.S. Composting Council]

The physical contaminant limits of § 17852(a)(24.5)(A)(1) become operative on January 1, 2018.

Subdivision (A)2.

This subdivision specifies that compostable material and/or digestate must meet the maximum metal concentrations as specified in § 17868.2. This ensures the compostable material and/or digestate that is land applied does not contain excessive amounts of metals which is necessary to protect public health and safety and the environment.

Subdivision (A)3.

This subdivision specifies that compostable material and/or digestate must meet the pathogen density limits as specified in § 17868.3(b)(1). This ensures the compostable material and/or digestate that is land applied does not contain excessive amounts of pathogens which is necessary to protect public health and safety and the environment.

Subdivision (A)4.a.

This subdivision specifies ~~that for land not zoned only for agricultural uses,~~ compostable material and/or digestate cannot be applied more frequently than once during a 12 month period, and, at the time of the application, the compostable material and/or digestate shall not exceed ~~an~~ average of 12 inches in total, accumulated depth. This is necessary to ensure that compostable material and/or digestate is land applied in a manner that is beneficial to the soil and protective of public health and safety and the environment. The enforcement agency, in consultation with the Regional Water Quality Control Board, may approve alternative application frequencies and depths. It is necessary to allow the enforcement agency to approve alternative frequencies because there may be a frequency that is equally effective in meeting the performance of the specified method.

Subdivision (A)4.b.

This subdivision specifies for land zoned only for agricultural uses, compostable material and/or digestate cannot be applied more frequently than three times during a 12 month period, and, at the time of the application, the compostable material and/or digestate shall not exceed 12 inches in total, accumulated depth. This is necessary to ensure that compostable material and/or digestate is land applied in a manner that is beneficial to the soil and protective of public health and safety and the environment. The enforcement agency, in consultation with the California Department of Food and Agriculture and the Regional Water Quality Control Board, may approve alternative application frequencies and depths. It is necessary to allow the enforcement agency to approve alternative frequencies because there may be a frequency that is equally effective in meeting the performance of the specified method.

Subdivision (A)5.

This subdivision specifies that verification of compliance with this subdivision must be provided to the enforcement agency upon request. This is necessary to ensure that the compostable

material and/or digestate meets the physical contaminant limits, maximum metal concentrations, pathogen density limits, and the application and depth limits as required in this subdivision to protect public health and safety and the environment.

Subdivision (B)

This subdivision is necessary to clarify that the land application is the final deposition of compostable material spread on land zoned only for agricultural uses under the conditions specified in requirements do not apply to (B)1. through (B)36.

Subdivision (B)1.

This subdivision specifies that the compostable material cannot contain more than 0.1% by application requirements do not apply to compost produced in compliance with Article 3.1% by weight of physical contaminants greater than 4 millimeters, and/or 3.2 of this Division. This is necessary to ensure the compostable material compost that is land applied does not contain excessive amounts of physical contaminants to protect public health and safety and the environment.

Subdivision (B)2.

This subdivision specifies that prior the land application requirements do not apply to application, the California Department of Food Compostable Material and Agriculture (CDFA) has determined or digestate for gardening or landscaping.

Subdivision (B)3.

This subdivision specifies that the land application requirements do not apply to the final deposition of compostable material and/or digestate spread on land by a local, state, or federal government entity, provided the material is applied in compliance accordance with all applicable requirements established by CDFA under law.

Subdivision (B)4.

This subdivision specifies that the land application requirements do not apply to the final deposition of agricultural by-product material spread on land as authorized by the State Water Resources Control Board or a Regional Water Quality Control Board pursuant to Waste Discharge Requirements, a Waiver of Waste Discharge Requirements, or a Resolution, provided this final deposition does not adversely affect public health and safety and the environment.

Subdivision (B)5.

This subdivision specifies that the land application requirements do not apply to the beneficial reuse at a solid waste landfill pursuant to 27 CCR § 20686.

Subdivision (B)6.

This subdivision specifies that the land application requirements do not apply to the beneficial reuse of biosolids pursuant to Part 503, Title 340 of the California Code of Regulations, and CDFA has determined that the land application and State Water Resources Control Board General Order No. 2004-0012-DWQ, or site-specific Waste Discharge Requirements or other issued requirements from the State Water Resources Control Board or a Regional Water Quality Control Board having jurisdiction.

Subdivision Note.

~~This subdivision note is agronomically beneficial. This is necessary to ensure that the land application of compostable material is protective of public health and safety and the environment per CDFA requirements.~~

~~Subdivision (B)3-~~

~~This subdivision specifies that prior to application, the enforcement agency has received confirmation that CDFA has made the determination specified in (B)2. This is necessary to ensure that the compostable material complies with all CDFA requirements. \_\_\_\_\_  
to clarify that, as specified in § 17850(d), nothing in these standards shall be construed as relieving any owner, operator, or designee from the obligation of obtaining all authorizations and comply with all requirements of other regulatory agencies, including but not limited to, local health entities, regional water quality control boards, air quality management districts or air pollution control districts, local land use authorities, and fire authorities.~~

Subdivision (a)(26)

“Mixed Solid Waste” is changed to “Mixed Material” to reduce confusion with the term “municipal solid waste,” which is used in Title 27, § 20164, and referenced throughout Title 14. The subdivision is re-structured to simplify the definition to more clearly differentiate mixed material from other types of compostable materials since the type of material, along with the volume of material, is used to determine the applicable permit tier.

Subdivision (a)(27.5)(A) and (B)

It is necessary to define nuisance in this Chapter so operators understand that all handling activities need to be conducted in a manner that minimizes odor impacts so as to not cause a nuisance, as specified in § 17687(a)(2). This definition is the same as the existing definition of “Nuisance” in Title 14, CCR, § 17402(a)(12) relating to Transfer/Processing Operations and Facilities.

Subdivision (a)(32)

This change is necessary because “human-made inert material” is a more appropriate term than “human-made inert products” to describe items that are a potential threat to public health and safety and the environment (e.g., glass shard vs. glass bottle). Physical contaminants or contaminants (human-made inert materials) reduce the value of compost feedstock, digestate, or finished compost rather than enhance the value as the term “human-made inert product” implies.

Subdivision (a)(38.5)

“Vegetative Food Material Composting Facility” definition is necessary to clarify that this type of facility can compost agricultural material, green material, vegetative food material, additives, and/or amendments. The definition distinguishes this type of facility from a facility that composts other types of materials such as biosolids, digestate, food material, and mixed material.

Subdivision (a)(41)

This revision is necessary to clarify that within-vessel composting occurs in the presence of oxygen to distinguish it from in-vessel digestion which occurs in the absence of oxygen.

**Article 2. Regulatory Tier Requirements for Compostable Material Handling Operations and Facilities**

### **§ 17854.1. Regulatory Tier Requirements for Compostable Material Handling Operations and Facilities.**

This section is added to clarify the regulatory tier requirements that apply to Compostable Materials Handling Operations and Facilities. Table 1 summarizes the regulatory tiers and requirements and is necessary to clarify to operators where their operations or facilities fit in the regulatory tier structure.

### **§ 17855. Excluded Activities**

#### Subdivision (a)

Revisions are necessary to correct grammar and to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

#### Subdivision (a)(1)

These revisions are necessary to correct grammar.

#### Subdivision (a)(2)(A) and (B)

This subdivision is revised to clarify that while vermicomposting is an excluded activity, the handling of compostable materials prior to and after its use as a growth medium is subject to the requirements of either the Compostable Material Handling or Transfer/Processing regulations, as specified in subdivisions (A) and (B) respectively. The clarification is necessary because some operators and enforcement agencies could and have inferred that all activities at such sites are excluded and could pose a risk to the public health and safety and the environment.

#### Subdivision (a)(3)(A) and (B)

This subdivision is revised to clarify that while mushroom farming is an excluded activity, the handling of compostable materials prior to and after its use as a growth medium is subject to the requirements of either the Compostable Material Handling or Transfer/Processing regulations, as specified in subdivisions (A) and (B) respectively. This is necessary because without clarification, some operators and enforcement agencies could and have inferred that all activities at such sites are excluded. This would pose a risk to the public health and safety and the environment.

#### Subdivision (a)(4)

Current regulations provide three small-scale composting exclusions: §§ 17855(a)(4), 17855(a)(6), and 17855(a)(8). The Department proposes to consolidate these 3 small-scale composting exclusions into one exclusion that allows the composting of green material, agricultural material, food material, and vegetative food material, alone or in combination, if the total amount of feedstock and compost on-site at any one time does not exceed 100 cubic yards and 500750 square feet. The Department believes this change is necessary because few entities are utilizing the current exclusion in § 17855(a)(4) because the material must be generated on-site, there is a 10% limit on the amount of food material that can be composted, and no more than a 1,000 cubic yards of material can be sold or given away annually. The proposed exclusion is designed to allow schools, community gardens, businesses, and other similar entities to compost food material without having to generate the material on-site and does not limit the amount of material that can be sold or given away. This small-scale composting activity poses little risk to public health and safety and the environment. Local jurisdictions can regulate these activities more stringently if deemed appropriate.

Subdivision (a)(5)(B)

Replacing “Publicly Operated Treatment Works” to “Publicly Owned Treatment Works” is necessary to be consistent with § 403.3(r) of Title 40 of the Code of Federal Regulations.

Subdivision (a)(5)(H)

The subdivision is revised to clarify that handling of compostable material as part of licensed animal food manufacturing or a licensed rendering operation is an excluded activity.

Subdivision (a)(6)

The deletion of this subdivision is necessary because this type of composting activity is now excluded under § 17855 (a)(4).

Subdivision (a)(7)

Subdivision (6) was deleted, so it is necessary to re-number subdivision (a)(7) to (a)(6).

Subdivision (a)(8)

The deletion of subdivision (8) is necessary because this type of composting activity is now excluded under § 17855(a)(4).

Subdivision (a)(9)

The deletion of subdivision (9) is necessary because it is duplicative of language in the definition of Disposal in § 17852 (a)(15).

### **§ 17855.2. Prohibitions**

This new language is necessary to clarify that all compostable materials handling operations and facilities and sites excluded from regulation under this Chapter are prohibited from composting the materials specified in this section (i.e., Excluded sites are subject to the requirements of this section).

Subdivision (a)

Revisions in this subdivision are necessary to make grammatical corrections and clarification.

Subdivisions (a)(1) and (2)

This revision is necessary to clarify that a food facility in this Chapter is as defined in Health and Safety Code § 113789. Subdivision (a) in current regulation is subdivided into Subdivisions (a)(1) and (a)(2) for clarity.

Subdivision (a)(3)

This new subdivision is necessary to allow the Department to approve, in consultation with the State Water Resources Control Board and the California Department of Food and Agriculture, other sources of unprocessed mammalian tissue, which would qualify as an exception to the prohibition (in addition to existing exceptions in (a)(1) and (a)(2)).

Subdivisions (b) and (c)

The deletion of the term “is prohibited” is necessary in these subdivisions because the prohibition is stated in the first sentence of this section. Subdivision (b) is clarified to state that the composting of treated and untreated medical waste is prohibited.

### **§ 17855.3. Permit Name.**

This section is necessary to clarify that any permit issued pursuant to this Article shall be entitled a “Compostable Materials Handling Facility Permit” except a permit issued to a

vegetative food material composting facility in § 17857.2(a) and a chipping and grinding facility in § 17862.1(b).

**§ 17855.4. Pre-Existing Permits and Notifications.**

The deletion of this subdivision is necessary because the deadline for complying with this subdivision expired in April 2005.

**§ 17856. Agricultural Material Composting Operations.**

Subdivision (a)

The revisions are necessary to clarify that Agricultural Material Composting Operations are subject to Enforcement Agency Notification requirements; reference to chipping and grinding operations is deleted because activities related to chipping and grinding operations are addressed in other subdivisions of this Chapter; and language regarding odor violations is deleted and moved to subdivision (b) of this section to improve readability. References to compliance with odor standards are deleted in subdivision (a) and moved to subdivision (b) to improve readability.

Subdivision (b)

The revisions are necessary to clarify that agricultural material composting operations are subject to the requirements of §§ 17863.4 (Odor Impact Minimization Plan) and 17863.4.1 (Odor Best Management Practice Feasibility Report) only if the enforcement agency determines that the operation has caused odor impacts in violation of § 17867(a)(2) and has notified the operator in writing of the violation.

Subdivision (c)

The restructuring of this subdivision and movement of most of the regulatory language in subdivisions (c)(1) and (c)(2) to subdivision (d) is necessary to improve clarity and readability as required in California Government Code § 11346.2. The new regulatory language in subdivision (c) is necessary to clarify that agricultural material composting operations may handle an unlimited quantity of agricultural material on the site, may sell or give away any or all compost they produce, and shall be inspected by the enforcement agency at least once each calendar year at a time when compostable material on the site is active compost.

Subdivision (d)

This new subdivision is necessary to specify the requirements that agricultural composting operations must comply with if their feedstock is both green material and agricultural material and whether the operations are located on Agricultural Land or land not zoned for agricultural uses.

Subdivision (d)(1)

This subdivision is necessary to clarify that agricultural composting operations on Agricultural Lands that sell or give away less than 1,000 cubic yards of compost per year may handle an unlimited amount of agricultural material and green material on the site but may be limited to 12,500 cubic yards of green material if the enforcement agency makes a written determination that handling excess green material may pose a risk to public health and safety or the environment.

Subdivision (d)(2)

This subdivision is necessary to clarify that agricultural composting operations located on land that is not zoned for agricultural uses and operations that sell or give away 1,000 cubic yards or

more of compost per year may handle an unlimited amount of agricultural material, but may not stockpile more than 12,500 cubic yards of green material feedstock on the site at any time.

Current regulatory language for enforcement agency inspection at operations under the Enforcement Agency Notification tier is not entirely consistent. These revisions are necessary to clarify and standardize the requirement for enforcement agency inspections, which will assist operators understand the requirements that apply to their sites. The flexibility in inspection frequency provided by this subdivision is necessary to prevent unnecessary regulation of operations that pose minimal risk to public health and safety and the environment.

### **§ 17857.1. Green Material Composting Operations and Facilities.**

#### Subdivision (a)

Revisions to subdivision (a) are necessary to clarify that green material composting operations can have no more than 12,500 cubic yards of feedstock, chipped and ground material, amendments, additives, active compost, and stabilized compost on-site at any one time and that these operations must comply with the applicable requirements specified in this Chapter.

#### Subdivision (a)(1)

Current regulatory language for enforcement agency inspection at operations under the Enforcement Agency Notification tier is not entirely consistent. These revisions are necessary to clarify and standardize the requirement for enforcement agency inspections, which will assist operators understand the requirements that apply to their sites. The flexibility in inspection frequency provided by this subdivision is necessary to prevent unnecessary regulation of operations that pose minimal risk to the public health and safety and the environment

#### Subdivision (a)(2)

Green material composting operations are currently limited to 12,500 cubic yards of off-site generated green material to be stored on-site at any one time. Some stakeholders have indicated that they are unable to meet seasonal demand for their products as a consequence of this restriction on accumulated materials. This subdivision is necessary to allow an operator to submit in writing a request to the enforcement agency to temporarily exclude stabilized compost from the calculation of the 12,500 cubic yard maximum material allowed on-site (seasonal storage adjustment) and provides the enforcement agency with discretion to authorize an operator to temporarily store additional material or to extend the storage time if the enforcement agency determines it will not adversely affect public health and safety ~~or~~ and the environment. The additional storage time may not exceed what is specified in the land use entitlement or 30 days, whichever is less.

#### Subdivision (a)(2)(A) 1 through 45

This subdivision requires an operator to submit additional information to the enforcement agency when requesting a seasonal storage adjustment. The operator must describe the site's storage capacity and average storage time of compostable material, provide a diagram of the operation and identify where the materials will be stored, describe additional fire prevention, protection and control measures needed to deal with the temporary increase in site capacity, and potentially revise the odor impact minimization plan to address the storage of the additional material. This information is necessary to enable the enforcement agency to determine if the seasonal storage adjustment is protective of public health and safety and the environment.

Subdivision (b)

The original subdivision (b) is deleted since the enforcement agency inspection frequency language is now included in (a)(1).

Subdivisions (b)(1) through (3)

These subdivisions are necessary to specify the types of violations, which will disqualify the facility from operating in the Enforcement Agency Notification tier and the actions the Enforcement Agency and the operator will execute in response to the violations.

Subdivision (c)

This revision is necessary to clarify that a site that handles more than 12,500 cubic yards of feedstock, chipped and ground material, amendments, additives, active compost, and stabilized compost on-site at any one time is a green material composting facility and must obtain a Compostable Materials Handling Permit and comply with all requirements of Chapter 3.1. Green composting operations that have received a seasonal storage adjustment authorization from the enforcement agency are not required to comply with this subdivision.

**§ 17857.2. Vegetative Food Material Composting Facilities.**

Subdivision (a)

Subdivision (a) is necessary to specify that vegetative food material composting facilities can have no more than 12,500 cubic yards of feedstock, ~~compost, and~~ chipped and ground material, amendments, additives, active compost, and stabilized compost on-site at any one time and that these facilities must obtain a Registration Permit and comply with the applicable requirements specified in this Chapter. Vegetative food material poses less risk to public health and safety and the environment than food material that is of animal origin or that contains salts, preservatives, fats or oils, and consequently, the composting of vegetative food material is allowed in the Registration Tier.

Subdivision (b)

Subdivision (b) is necessary to specify that vegetative food material composting facilities that have more than 12,500 cubic yards of feedstock, ~~compost, and~~ chipped and ground, amendments, additives, active compost, and stabilized compost on-site at any one time must obtain a Compostable Materials Handling Permit and shall comply with applicable requirements of this Chapter.

**§ 17859.1. Biosolids Composting at POTWs.**

Subdivision (a)

Replacing “Publicly Operated Treatment Works” to “Publicly Owned Treatment Works” is necessary to be consistent with terminology used in § 403.3(r) of Title 40 of the Code of Federal Regulations.

Subdivision (a)(1)

Current regulatory language for enforcement agency inspection at operations under the Enforcement Agency Notification tier is not entirely consistent. These revisions are necessary to clarify and standardize the requirement for enforcement agency inspections, which will assist operators understand the requirements that apply to their sites. The flexibility in inspection frequency provided by this subdivision is necessary to prevent unnecessary regulation of operations that pose minimal risk to the public health and safety and the environment.

## § 17862. Research Composting Operations.

### Subdivision (a)

This revision is necessary to make the list of allowable feedstock at research composting operations consistent with allowable feedstock at other operations, and to specify that both active compost and stabilized compost count toward the 5,000 cubic yards of material allowed on-site at any one time.

### Subdivision (b)

This revision is necessary to make the list of allowable feedstock at research composting operations utilizing within-vessel processing consistent with allowable feedstock at other operations.

### Subdivision (d)

Subdivision 17862(d) is revised to require a research composting operation to submit a report to the enforcement agency that includes the results and conclusions drawn from the research after no longer than a 2 year period of operation. The new language provides the enforcement agency with discretion to allow further research for a maximum of 2 years or not allow further research and require the operator to conduct site restoration at the facility- or obtain other appropriate authorization pursuant to Article 2 of this Chapter prior to continuing operations.

This is necessary to ensure that meaningful research is performed at such operations.

### Subdivision (e)(3)

This subdivision is revised to require a research composting operation using unprocessed mammalian tissue as feedstock to submit a report to the enforcement agency that includes the results and conclusions drawn from the research after no longer than a 6 month period of operation. The new language provides the enforcement agency with discretion to allow further research for a maximum of 2 years or not allow further research and require the operator to conduct site restoration at the facility- or obtain other appropriate authorization pursuant to Article 2 of this Chapter prior to continuing operations.

This is necessary to ensure that meaningful research is performed at such operations.

### Subdivision (g)

Current regulatory language for enforcement agency inspection at operations under the Enforcement Agency Notification tier is not entirely consistent. These revisions are necessary to clarify and standardize the requirement for enforcement agency inspections, which will assist operators understand the requirements that apply to their sites. The flexibility in inspection frequency provided by this subdivision is necessary to prevent unnecessary regulation of operations that pose minimal risk to the public health and safety and the environment.

## § 17862.1. Chipping and Grinding Operations and Facilities.

### Subdivision (a)

This revision is necessary to clarify that chipping and grinding operations and facilities must comply with Enforcement Agency Notification requirements and applicable requirements specified in this Chapter.

### Subdivision (a)(1)

Current regulatory language for enforcement agency inspection at operations under the Enforcement Agency Notification tier is not entirely consistent. These revisions are necessary to

clarify and standardize the requirement for enforcement agency inspections, which will assist operators understand the requirements that apply to their sites. The flexibility in inspection frequency provided by this subdivision is necessary to prevent unnecessary regulation of operations that pose minimal risk to the public health and safety and the environment.

Subdivision (b)

This revision is necessary to clarify that a chipping and grinding facility must obtain a Registration Permit if it receives more than 200 tons per day but not more than 500 tons per day of material— and must comply with the applicable requirements of this Chapter.

Subdivision (c)

This revision is necessary to clarify that a chipping and grinding facility that receives more than 500 tons per day of material must comply with the applicable requirements of this Chapter.

Subdivision (d)

On and after January 1, 2018, a chipping and grinding operation or facility is required to sample every 5,000 cubic-yards of chipped and ground material produced to determine the percentage of physical contaminants greater than 4 millimeters in the representative sample. Operations that do not produce 5,000 cubic-yards are required to take and analyze one composite sample of chipped and ground material produced every 12 month period. A chipping and grinding operation or facility shall not be subject to the provisions of § 17868.3.1 of this Chapter, however, any chipped and ground material that will be land applied must meet the physical contamination requirements of § 17852(a)(24.5)(A)(1). This is necessary to ensure that chipped and ground material is being analyzed for physical contamination prior to the point where the material is removed from the site.

Subdivision (e)

This revision clarifies that, although chipping and grinding operations and facilities are not subject to the provisions of §§§ 17868.1 through § 17868.3, any chipped and ground material that will be land applied must meet the maximum metal concentration requirements of § 17852(a)(24.5)(A)(2) and (3). This is necessary to ensure that chipped and ground material that is eventually applied to land is applied in a manner that protects public health and safety and the environment.

Subdivision (ef)

This revision are necessary to clarify that chipping and grinding operations or facilities must meet the contamination limits as specified in § 17852(a)(21).

Subdivision (fg)

The revisions in this subdivision are necessary to clarify that a chipping and grinding operation or facility will be regulated as green material composting operation or facility if material is stored longer than specified in § 17852(a)(10)(A)(2).

### Article 3. Report of Facility Information

#### § 17863. Report of Composting Site Information.

This subdivision requires compostable material handling facilities to submit a Report of Composting Site Information at the time of permit application. Written operating procedures provide guidance to operators, and operators that adhere to proper procedures have the best compliance records. This is necessary because the larger on-site volumes of compostable materials allowed at facilities pose an increased threat to public health and safety and the

environment. Revisions to this subdivision are necessary to clarify that an operator of a Vegetative Food Material Composting Facility must file a Report of Composting Site Information at the time of application for a Registration Permit.

**§ 17863.4. Odor Impact Minimization Plan.**

One of the greatest threats to the viability of the composting industry is the negative public perception caused by odor associated with composting. Along with the anticipated increase in food material composting (to help meet AB 341 recycling goals), and the steady urbanization of California, comes an increased likelihood of odor complaints. § 17863.4 sets forth the requirements for compostable material handling operations and facilities must meet to minimize odor impacts. The Department intends for all existing compostable materials handling operations and facilities (unless exempt from this requirement) to have a complete odor impact minimization plan on the effective date of these regulations.

Subdivision (b)(1)

This revision specifies that operators must collect data ~~on~~for odors generated on-site, which is necessary to address the possible sources and causes of odors and protect public health and safety and the environment.

Subdivision (b)(3)

This revision specifies that operators must develop, in addition to a complaint response protocol, a recordkeeping protocol, which is necessary to accurately track odor complaints to protect public health and safety and the environment.

Subdivision (b)(4)

This subdivision is necessary to specify that operators are required to provide a description of design considerations and/or projected ranges of optimal operation to be employed in minimizing odor and references several factors that could impact odor generation. Since composting operations and facilities utilize a variety of technologies and equipment, operators will provide site-specific documentation as applicable to their operation or facility.

Subdivision (b)(5)

This subdivision is necessary to specify that operators are required to provide a description of operating procedures for minimizing odor. Since composting operations and facilities utilize a variety of practices and technologies to reduce odors, operators will provide site-specific documentation as applicable to their operation or facility.

Subdivisions (f)(1) through (3)

This subdivision is revised to specify that if the odor impact minimization plan is being followed and the enforcement agency determines that odor impacts are still occurring, the enforcement agency shall direct the operator to prepare and implement an Odor Best Management Practice Feasibility Report (Report). The enforcement agency shall consider the results of the Report prior to issuing a Notice and Order requiring the operator to take additional reasonable and feasible measures to minimize odors, unless the enforcement agency has evidence that a specific and immediate action would reduce the odor impacts there is an imminent threat to public health and safety and the environment; or a ~~public~~ nuisance has occurred. These revisions are necessary to ensure that the operator implements odor mitigation measures to protect public health and safety and the environment.

#### § 17863.4.1. Odor Best Management Practice Feasibility Report

##### Subdivision (a)

This subdivision specifies that an operator may voluntarily prepare an Odor Best Management Practice Feasibility Report (Report) or the enforcement agency may require the operator to prepare a Report after consecutive or chronic odor violations as determined pursuant to § 17863.4(f). This is necessary to provide more reliable odor data to the enforcement agency than what is currently required in the Odor Impact Minimization Plan as specified in § 17863.

##### Subdivisions (b)(1) through (3)

These subdivisions specify what the operator should include in the Odor Best Management Practice Feasibility Report, such as data on potential on-site odor sources, identification and ranking of on-site odor sources, a list and analysis of each best management practice used, and a list and analysis of all potential best management practices which the operator has not used. The operator will also develop a plan and schedule for implementing the best management practices that are recommended. These requirements are necessary so that the operator accurately identifies odor sources/impacts and develops best management practices to mitigate odors for the protection of public health and safety and the environment.

##### Subdivision (c)

This subdivision requires the operator to submit the ~~plan and schedule~~ Odor Best Management Practice Feasibility Report (Report) required by subdivisions (a) and (b), and the plan and schedule required by subdivision (b)(3)(C). to the enforcement agency and the Department for review. If the enforcement agency has required the operator to prepare ~~an Odor Best Management Practice Feasibility Report (Report).~~, the operator must then submit the plan and schedule within 14 days or other timeframe approved by the enforcement agency. These requirements are necessary to ensure that the enforcement agency and Department review the Report in a timely manner.

##### Subdivision (d)(1) and (2)

This subdivision specifies that, within 30 days, the enforcement agency, in consultation with the Department, shall approve the Odor Best Management Practice Feasibility Report (Report) and direct the operator to implement the plan and/or submit changes or additional information. This is necessary to make clear to the enforcement agency the timeline and procedures for processing the Report submitted by the operator.

##### Subdivision (e)

The subdivision specifies that the enforcement agency may issue a Notice and Order pursuant to § 17863.4(f) to process the Odor Best Management Practice Feasibility Report. The enforcement agency's ability to issue a Notice and Order is necessary to ensure that an operator will implement or submit changes to the plan in the Odor Best Management Practice Feasibility Report to reduce odors, which will protect public health and safety and the environment.

### Article 6. Composting Operating Standards

#### § 17867. General Operating Standards.

##### Subdivision (a)(2)

This subdivision is necessary to clarify that odors impacts must be minimized to not cause a nuisance to protect public health, and safety, and the environment.

Subdivisions (a)(3) through (15)

Re-numbering of these subdivisions is necessary due to the addition of subdivision (a)(2).

## Article 7. Environmental Health Standards

### § 17868.1. Sampling Requirements.

This revision is necessary to clarify that sampling requirements of this section apply to composting facilities.

Subdivision (a)

This revision is necessary to clarify that operators must also conduct maximum acceptable metal concentrations verification in addition to pathogen reduction verification ~~when prior to the point where~~ compost is ~~sold, bagged for sale, given away, and~~ removed from the site ~~or beneficially used on-site~~. Department staff became aware of some operators selling compost and removing the finished product from the site before the ~~sample test~~ results ~~from the samples~~ were received. The new language was added to ensure that compost leaving the site meets the metals concentration limits and pathogen reduction requirements to protect public health and safety and the environment.

Subdivision (a)(1)

The addition of agricultural material and vegetative food material to this subdivision are necessary to clarify that operators who compost these feedstocks must also obtain and analyze one composite sample for every 5,000 cubic-yards of compost produced. If the composting operation or facility produces less than 5,000 cubic-yards of compost in a 12 month period, the operator shall analyze at least one composite sample of compost produced every 12 month period. The term “mixed solid waste” is revised to “mixed material” as necessary to reflect the change specified in § 17852(a)(26).

Subdivision (a)(2)

The addition of the “Table 1 Compostable Material Handling Operations and Facilities Placement into the Regulatory Tiers” in § 17854.1 makes it necessary for “Table 1 Frequencies of Compost Sampling for Biosolids Composting Facilities” to be renumbered to Table 2.

Subdivision (a)(3)

This revision is necessary to clarify that the California Department of Health Services is now called the California Department of Public Health.

Subdivision (c)

This revision clarifies that the enforcement agency may approve alternative methods of sampling for any compostable material handling operation or facility, including a green material composting operation or facility. It is necessary to allow the enforcement agency to approve compliance alternatives because there may be methods that are equally effective in meeting the performance of the specified method.

### § 17868.2. Maximum Metal Concentrations.

Subdivision (a)

The subdivision is necessary to clarify that compost cannot contain metals in excess of the maximum acceptable metal concentrations shown in Table 3.

The US EPA revised the maximum concentrations of certain metals allowed in biosolids that are land-applied (60 FR 54769, Oct. 25, 1995, codified at 40 CFR, Part 503, § 503.13(b)(3)(Table 3)). At that time, EPA eliminated chromium from the list of regulated metals and increased the amount of selenium allowed in biosolids applied to land. The revisions to the maximum concentrations of chromium and selenium allowed in compost reflect the changes adopted by EPA.

The addition of the “Table 1 Compostable Material Handling Operations and Facilities Placement into the Regulatory Tiers” in § 17854.1 makes it necessary for “Table 2 Maximum Acceptable Metal Concentrations” to be renumbered to Table 3.

Department staff became aware of some operators selling compost and removing the finished product from the site before the sampletest results from the samples were received. Requiring the operator to receive the sample results prior to the compost leaving the site is necessary to ensure that compost meets the metals concentration limits and pathogen reduction requirements to protect public health and safety and the environment.

#### Subdivision (a)(1)

Although the US EPA eliminated chromium from the list of regulated metals, the proposed regulation will require operators to test for chromium concentration along with other metal concentrations specified in Subdivision (a) and maintain records of all chromium concentrations. This requirement is necessary to protect public health, and safety, and the environment.

#### Subdivision (b)

This revision clarifies that the enforcement agency may approve alternative methods for any compostable material handling operation or facility, including green and food material composting operations and facilities, to ensure the maximum acceptable metal concentrations are not exceeded. It is necessary to allow the enforcement agency to approve compliance alternatives because there may be methods that are equally effective in meeting the performance of the specified method.

### **§ 17868.3. Pathogen Reduction.**

#### Subdivision (a)

This is revised to clarify that compost cannot contain any pathogens in amounts that exceed pathogen reduction requirements in this subdivision.

Department staff became aware of some operators selling compost and removing the finished product from the site before the sampletest results from the samples were received. Requiring the operator to receive the test result of sample ~~results~~ prior to the compost leaving the site is necessary to ensure that compost meets the maximum metals concentration limits and pathogen reduction requirements to protect public health and safety and the environment.

#### Existing Subdivision (c)

Subdivision is deleted and moved to new subdivision (d) as necessary to clarify that alternative methods of compliance to meet pathogen reduction requirements apply to all subdivisions of § 17868.3.

#### New Subdivision (c)

The revision is necessary to clarify that temperature requirements in Subdivisions (c)(1) and (2) only apply to compost operations and facilities that utilize a windrow composting process or an aerated static pile composting process.

Subdivision (d)

This is necessary to clarify that alternative methods of compliance to meet pathogen reduction requirements apply to all subdivisions of § 17868.3.

### § 17868.3.1. Physical Contamination Limits.

This section shall become operative January 1, 2018.

Subdivision (a)

This is necessary to prevent the land application of compost with excessive physical contaminants and will protect public health and safety and the environment. The limit on the percentage of physical contaminants is consistent with nationwide trends (the states of Massachusetts, Minnesota, Montana, Ohio, Washington, and Wisconsin, as well as the United Kingdom, have limits on physical contaminants). In California, the Department of Transportation's (Caltrans) Revised Compost Nonstandard Specification 21-1.02M, calls for physical contaminants (plastic, glass, and metal) to be less than 0.5% by dry weight.

"Glass shards (4-mm to 13-mm) can pose a human and animal hazard with unprotected exposure or through direct ingestion. Metal fragments can pose the same hazard, and could be a potential source of trace elements upon interaction with soil. Hard plastic can be an aesthetic concern and in large quantities may affect physical properties of a compost-amended soil, (e.g., soil coloring, heat retention, drainage)." [Test Methods for the Examination of Composting and Compost, Method 03.06 Glass Shards, Metal Fragments and Hard Plastic, pg. 03.06-1 - U.S. Department of Agriculture/U.S. Composting Council]

Compost that does not meet the physical contaminant standard must be ~~disposed~~, processed to remove physical contaminants, and disposed, or may be used if approved by local, state or federal agencies having appropriate jurisdiction.

Department staff is aware of some operators ~~sold~~selling compost and ~~removed~~removing the finished product from the site before the ~~sample~~test results ~~from the samples~~ were received. Requiring the operator to receive the ~~sample~~test results ~~from the samples~~ prior to the compost leaving the site is necessary to ensure that compost meets the physical contaminants requirements to protect public health and safety and the environment.

Subdivision (b)

~~Compost operations are not required to sample for physical contaminants since they are only allowed to accept feedstock with less than 1.0% physical contaminants by weight, and consequently, the finished compost should not have excessive physical contaminants. This regulation is necessary to allow the enforcement agency the discretion to require a composting operation to send a representative sample to a laboratory if the enforcement agency suspects that the compost may exceed the 0.1% physical contaminant requirement to protect public health and safety and the environment.~~

Subsection (c)

This subdivision specifies that all composting operations and facilities must obtain a ~~representative and random composite~~ sample for every 5,000 cubic-yards of compost produced

and send the sample to a laboratory to measure physical contaminants. ~~Since the composting facilities may accept feedstock with more operation or facility produces less than 1.0% physical contaminants by weight, this 5,000 cubic yards of compost in a 12 month period, the operator shall take and analyze at least one composite sample of compost produced every 12 month period.~~ This subdivision is necessary to ensure that the finished compost meets ~~the 0.4~~ the 0.5% physical contaminant requirement to protect public health and safety and the environment.

Subdivision (c)(1) through (3)

This subdivision specifies that the enforcement agency may require the operator to send a composite sample to a laboratory to determine the percentage of physical contaminants if there is reason to believe that the operator's composite sample did not provide accurate results. The subdivision includes a protocol for determining the percentage of physical contaminants by dry weight.

Subdivision (d)(1) and (2)

This subdivision is necessary to ensure accurate testing of physical contaminants in compost. The sampling methodology in Subdivision (d) is the same as specified in § 17868.1 (b) to ensure that operators sample for maximum metal concentrations, pathogen reduction, and physical contaminants in a consistent, accurate manner to protect public health and safety and the environment.

Subdivision (e)

It is necessary to allow the enforcement agency to approve compliance alternatives because there may be methods that are equally effective in meeting the performance of the specified method.

**§ 17868.5. Green Material and Vegetative Food Material Processing Requirements.**

These revisions are necessary to clarify that green material and vegetative food material, as defined in §§ 17852(a)(21) and 17852(a)(20)(A), must satisfy the requirements of subdivisions (a) through (d).

Subdivision (a)

Revisions in this subdivision are necessary to clarify that visual observation of incoming waste loads and load sorting are necessary to quantify the percentage of physical contaminants and feedstock that does not meet the definition of green material or vegetative food material.

Subdivision (a)(1)

This subdivision is revised to increase visual inspection of daily incoming feedstock from a minimum of one percent to 10 percent to determine if the loads contain physical contaminants greater than 1.0% of total weight or materials other than green material or vegetative food material. This is necessary to prevent feedstocks that pose a greater risk to the public health and safety and environment from being handled at green material handling operations or facilities.

Subdivision (b)

This revision allows the enforcement agency to be present when the operator takes a sample of feedstock to ensure that the operator obtains a representative sample of feedstock for determining the percentage of physical contaminants. This is necessary to prevent feedstocks that pose a greater risk to the public health and safety and environment from being handled at green material handling operations or facilities.

Subdivision (c)

This subdivision is deleted because agricultural material composting operations must meet the sampling requirement in § 17868.1 and the maximum metal concentration limits specified in Table 3 of § 17868.2. Therefore, it is not necessary for agricultural material composting operations to ensure that the feedstock meets the maximum metal concentration limits because the compost produced at agricultural material composting operations must meet the maximum metal concentration limits.

Subdivisions (d) and (e)

Subdivision (d) is reordered to (c) and subdivision (e) is reordered to (d) because subdivision (c) is deleted.

## **Article 8. Composting Operation and Facility Records**

### **§ 17869. General Record Keeping Requirements.**

Subdivision (a)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board, effective January 1, 2010.

Subdivision (f)

§ 17868.3.1 Physical Contamination Limits is a new section in Article 7, and the revision is necessary to clarify that an operator shall record all test results generated by compliance with Article 7, including physical contamination limits. Operators of chipping and grinding operations and facilities must record the determinations of the percentage of physical contaminants required by § 17862.1(d).

## **Chapter 3.2. In-Vessel Digestion Operations and Facilities Regulatory Requirements**

### **Article 1. In-Vessel Digestion Operations and Facilities Regulatory Requirements**

#### **§ 17896.1. Authority and Scope.**

Subdivision (a)

This subdivision is necessary to clarify that the permitting requirements and minimum operating standards for in-vessel digestion operations and facilities are specified in this Chapter; the regulatory tier requirements of §§ 17896.3 through 17896.15 are not applicable to operations and facilities that are subject to regulations elsewhere in this Division; and activities placed within the excluded tier in other chapters of this Division may still be subject to the regulatory requirements specified in this Chapter.

Subdivision (b)

This subdivision is necessary to clarify that the Department is authorized to adopt these regulations and identify the statutes by which the Department's authority is derived.

Subdivision (c)

This subdivision is necessary to clarify that the intentional processing of organic material via in-vessel digestion is regulated under this chapter but naturally-occurring digestion of organic material does not fall under the scope of these regulations.

Subdivision (d)

This subdivision is necessary to clarify that the regulations are not intended to limit any other ~~federal~~local, state, or ~~state, or local~~federal agencies' authority and that no city or county may promulgate or enforce laws that otherwise conflict with the provisions of this Chapter.

Subdivision (e)

This subdivision is necessary to clarify that the operator, owner, or designee is obligated to comply with all ~~federal~~local, state, or ~~local~~federal agencies' requirements.

**§ 17896.2. Definitions.**

A number of technical and administrative terms appear in this Article that require definitions to assure regulatory consistency and clarity. These terms have specific meanings to describe the various types of in-vessel digestion operations and facilities and activities for purposes of this Article. If these terms are not defined, the meanings may be unclear and the regulated public as well as the regulators may fail to properly interpret the regulations. The definitions are placed in a separate section to avoid repetition throughout the Article each time they appear.

Subdivision (a)(1)

“Agricultural Material” defines what constitutes this type of material and is necessary because in-vessel digestion of agricultural material is an excluded activity if it meets the requirements of § 17896.6(a)(2).

Subdivision (a)(2)

“Agricultural Site” defines where agricultural activities occur and is necessary because in-vessel digestion of agricultural material is an excluded activity if it meets the requirements of § 17896.6(a)(2).

Subdivision (a)(3)

“Biogas” definition is necessary to clarify for purposes of regulation that biogas is generated at in-vessel digestion operations or facilities and is composed primarily of carbon dioxide, hydrogen, and methane.

Subdivision (a)(4)

“Compost” definition is necessary to clarify for purposes of regulation that compost is the product resulting from the controlled biological decomposition of organic solid wastes that are source separated from the municipal solid waste stream, or which are separated at a centralized facility.

Subdivision (a)(5)

“Contact Water” is adapted from an existing transfer station definition [§ 17402(a)(1)]. This definition is necessary to make clear for purposes of regulation that impeded drainage and rain on exposed waste results in the creation of contact water. This subdivision defines a means to prevent user contact with the contaminated water by preventing its creation.

Subdivision (a)(6)

“Digestate” definition is necessary to clarify for purposes of regulation that digestate is the solid and/or liquid residual material remaining after organic material has been processed in an in-vessel digester.

Subdivision (a)(7) (A) through (C)

“Digestion” definition is necessary to clarify for purposes of regulation that digestion is the controlled biological decomposition of organic solid wastes and includes aerobic digestion, anaerobic, digestion, and other controlled biological decomposition processes.

Subdivision (a)(8)

“Dairy In-vessel Digestion Operation” definition is necessary to clarify for purposes of regulation that a dairy that co-digests imported solid waste feedstock with manure ~~and other agricultural material~~ in an in-vessel digester, in accordance with Waste Discharge Requirements issued by a Regional Water Quality Control Board, is a dairy dairy in-vessel digestion operation. The operation may also co-digest agricultural material. This definition distinguishes this of type of in-vessel digestion activity from other types of in-vessel digestion activities that do not qualify as dairy in-vessel digestion operations. It is important to note that only co-digestion activities at the dairy are being regulated, not the dairy itself.

Subdivision (a)(9)

“Distribution Center In-vessel Digestion Operation” definition is necessary to clarify for purposes of regulation a site that receives, for the purpose of digestion in an in-vessel digester, unsold products from retail stores to which the products were originally sent is a Distribution Center In-vessel Digestion Operation. This definition distinguishes this of type of in-vessel digestion activity from other types of in-vessel digestion activities that do not qualify as distribution center in-vessel digestion operations. This subdivision specifies that all unsold products that are putrescible shall be refrigerated at the retail store and shall be maintained at a core temperature of 13 degrees Celsius (55 degrees Fahrenheit) or less during transport.

Subdivision (a)(10)

“EA” is adapted from an existing transfer station regulation definition [§ 17402(a)(5)]. This definition provides the meaning for the abbreviated term. This definition is necessary because without it, a much longer phrase would need to be used repeatedly throughout the proposed regulations.

Subdivision (a)(11)

This subdivision is necessary to define film plastic as it relates to the physical contamination limits.

Subdivision (a)(12)

This definition is necessary because food material is one of the types of materials included in the meaning of “anaerobically digestible material” as described in § 17896.6(a)(1)(C).

Subdivision (A)

This definition is necessary because vegetative food material is one of the types of materials included in the meaning of “anaerobically digestible material” as described in § 17896.6(a)(1)(C).

Subdivision (a)(13)

“Hazardous Wastes” is adapted from an existing transfer station definition [§ 17402(a)(7)]. This definition is necessary to make clear what qualifies as nonhazardous waste for purposes of regulation and to clearly differentiate it from hazardous solid waste, which is not subject to the proposed regulations but is subject to regulations of the Department of Toxic Substances Control.

Subdivision (a)(~~42~~14)

“In-vessel Digester” definition is necessary to clarify for purposes of regulation that an In-vessel Digester means the sealed container(s) or sealed structure in which the entire digestion process occurs.

Subdivision (a)(~~43~~15)

“Large Volume In-vessel Digestion Facility ” definition is necessary to make clear that an in-vessel digester that receives an average greater than 100 tons ~~or more~~ of solid waste per operating day or greater than 700 tons per week of solid waste qualifies as a large volume in-vessel digestion facility for purposes of regulation. This definition distinguishes this of type in-vessel digestion activity from other types of in-vessel digestion activities that do not qualify as large volume in-vessel digestion facilities.

Subdivision (a)(~~44~~16)

“Limited Volume In-vessel Digestion Operation” definition is necessary to make clear that an in-vessel digester that receives less than an average of 15 tons (or 60 cubic yards) of solid waste per operating day ~~and not more than~~ 105 tons (or 420 cubic yards) per week or the solid waste ~~quantity~~storage capacity limitations of the general design of the operation (whichever is less) qualifies as a limited volume in-vessel digestion operation. This definition distinguishes this type of in-vessel digestion activity from other types of in-vessel digestion activities that do not qualify as limited volume in-vessel digestion operations.

Subdivision (a)(~~45~~17)

“Litter” is adapted from an existing transfer station definition [§ 17402(a)(10)]. This definition is necessary to clarify what constitutes an improper migration of material.

Subdivision (a)(~~46~~18)

“Manure” is adapted from an existing compostable material handling definition [§ 17852(a)(25)]. This definition is necessary to specify that only avian or herbivore excrement may be considered manure since omnivore excrement is thought to pose a greater risk to public health and safety and the environment and should be regulated accordingly.

Subdivision (a)(~~47~~19)

“Medium Volume In-vessel Digestion Facility” definition is necessary to make clear an in-vessel digester that receives an average of between 15 tons (or 60 cubic yards) ~~or more but less than~~and 100 tons of solid waste per operating day ~~and less than~~but shall not exceed 700 tons (or 2,800 cubic yards) per week or the solid waste ~~quantity~~storage capacity limitations of the general design of the operation (whichever is less) qualifies as a medium volume in-vessel digestion operation for purposes of regulation. This definition distinguishes this type of in-vessel digestion activity from other types of in-vessel digestion activities that do not qualify as medium volume in-vessel digestion facilities.

Subdivision (a)(~~48~~20)

“Nuisance” is adapted from an existing transfer station definition [§ 17402(a)(12)]. This definition is necessary to make clear for purposes of the regulations what constitutes a nuisance. This subdivision defines a means to prevent the creation of anything that is injurious to human health or is offensive to the senses.

Subdivision (a)(~~49~~21)

“On-site” is adapted from an existing transfer station definition [§ 17402(a)(13)]. This definition is necessary to make clear for purposes of regulation that the term “on-site,” which is used

repeatedly throughout this Article, means the same as the operations area.

Subdivision (a)(~~20~~22)

“Operating Day” is adapted from an existing transfer station definition [§ 17402(a)(15)]. This definition is necessary to make clear what constitutes an operating day for purposes of calculating the amount of waste received in a 24-hour period.

Subdivision (a)(~~21~~23)

“Operating Record” is adapted from an existing transfer station definition [§ 17402(a)(16)]. This definition is necessary to make clear what constitutes an operating record to aid the enforcement agency in their responsibility to oversee all aspects of solid waste operations. Operator requests for alternative recordkeeping locations are best served by the enforcement agency.

Subdivision (a)(~~22~~24)

“Operations Area” is adapted from an existing transfer station definition [§ 17402(a)(17)]. This definition is necessary to make clear for purposes of regulation what areas of a transfer/processing operation or facility are subject to regulation by the Department. The definition clearly defines what areas are specific to the operations area. The operations area is the same as the permitted boundary but may or may not be the same as the property boundary.

Subdivision (a)(~~23~~25)

“Operator” is adapted from an existing transfer station definition [§ 17402(a)(18)]. This definition is necessary to make clear for purposes of regulation who is legally responsible for an in-vessel digestion operation or facility and who will comply with regulatory requirements as specified. This term is commonly used by all types of solid waste operations and facilities and may have more than one meaning. If the operator is not the same as the owner, they have joint legal responsibility for the operation or facility.

Subdivision (a)(~~23~~25)(A) is necessary to make specific that the operator is legally responsible for complying with the proposed regulations.

Subdivision (a)(~~23~~25) (B) is necessary to make specific that the operator is legally responsible for complying with all other agencies' applicable requirements.

Subdivision (a)(~~23~~25)(C) is necessary to make specific that the operator is legally responsible for development and physical operation of the operations area.

Subdivision (a)(~~23~~25)(D) is necessary to make specific that the operator listed on the permit application or enforcement agency notification is legally responsible for controlling the activities at an operation or facility.

Subdivision (a)(~~24~~26)

“Owner” is adapted from an existing transfer station definition [§ 17402(a)(19)]. This definition is necessary to make clear for purposes of regulation, who is the owner of an in-vessel digestion operation or facility. This term is commonly used by all types of solid waste operations and facilities and may have more than one meaning. If the owner is not the same as the operator, they have joint legal responsibility for the operation or facility.

Subdivision (a)(~~25~~27)

The “Physical contamination” or “contaminants” definition is necessary to specify the types of human-made inert material that must not exceed the limit specified in § 17896.61.

Subdivision (a)(28)

"Putrescible Wastes" is adapted from an existing transfer station definition [§ 17402(a)(21)]. This definition is necessary to make clear for purposes of regulation what constitutes putrescible wastes. This subdivision defines a means to prevent the creation of conditions and to identify the causes of offensive conditions that may be injurious to human health.

Subdivision (a)(~~26~~29)

The “rendering” definition is necessary for determining the level of regulatory authority over such activities. Rendering activities as described in § 17896.6 would be excluded from the regulatory tier provided no solid waste feedstock bypasses the rendering process.

Subdivision (a)(30)

“Salvaging” is adapted from an existing transfer station definition [§ 17402(a)(24)]. This definition is necessary to make clear what qualifies as salvaging for purposes of regulation and to clearly differentiate it from scavenging.

Subdivision (a)(~~27~~31)

"Scavenging" is adapted from an existing transfer station definition [§ 17402(a)(25)]. This definition is necessary to make clear what qualifies as scavenging for purposes of regulation and to clearly differentiate it from salvaging.

Subdivision (a)(~~28~~32)

“Sealed Container” definition is necessary to clarify for purposes of regulation that a tank, vessel, or similar apparatus capable of containing liquids and air-borne emissions during the entire digestion process to control odors or other nuisance conditions is a sealed container.

Subdivision (a)(~~29~~33)

“Sealed Structure” definition is necessary to clarify for purposes of regulation that a fully enclosed building capable of containing liquids and controlling air-borne emissions (e.g., negative air pressure) that could contribute to odors or other nuisance conditions is a sealed structure.

Subdivision (a)(~~30~~34)

“Special Waste” is adapted from an existing transfer station definition [§ 17402(a)(27)]. This definition is necessary to make clear what qualifies as special waste for purposes of regulation. Special waste includes any solid waste that, because of its source of generation, physical, chemical or biological characteristics or unique disposal practices require special handling.

Subdivision (a)(~~31~~35)

“Spotter” is adapted from an existing transfer station definition [§ 17402(a)(28)]. This definition is necessary to identify what activities a spotter is responsible for. This subdivision provides a means to help protect the public health, and safety and the environment by the activities of the spotter.

Subdivision (a)(~~32~~36)

“Store” is adapted from an existing transfer station definition [§ 17402(a)(29)]. This definition is necessary to distinguish this type of activity from other solid waste activities of operations and/or facilities.

### **§ 17896.3. Pre-Existing Permits and Notifications.**

As a result of the new regulations, many existing in-vessel digestion operations and facilities will be required to obtain a different permit than the one they are currently operating under.

Additionally, some activities that are currently excluded from regulation will be required to obtain a permit. § 17896.3 specifies the timeframes for either scenario. The Department does not intend for such operations and facilities to cease operations until the new permit is obtained but does intend for all in-vessel digestion operations and facilities to comply with the applicable standards outlined in Chapter 3.2. This section only allows extra time to comply with permit requirements; state minimum standards are applicable on the effective date of the regulations and is necessary to prevent undue hardship to operators. This provision is necessary because otherwise these businesses would be in violation of the regulations on the effective date even though obtaining the permit can take years.

#### Subdivision (a)

Facilities that have previously obtained a permit under the current regulations will be allowed to operate under that permit until the enforcement agency conducts a permit review pursuant to Title 14, CCR, §§ 18104.7 and 18105.9 and determines that regulation under this Chapter is required. If the enforcement agency makes such a determination, the operator has two years to obtain that permit. This is necessary to prevent undue hardship to in-vessel digestion facilities.

#### Subdivision (b)

This subdivision states that activities that had previously been operating pursuant to an Enforcement Agency Notification in accordance with the current regulations may continue to operate in accordance with its Enforcement Agency Notification or regulatory authorization until the enforcement agency determines that regulation under this Chapter is required. The enforcement agency shall make this determination no sooner than 120 days and no later than two years from the effective date of these regulations. If the enforcement agency determines that regulation under this Chapter is required, the operator shall comply with this Chapter within two years of that determination. This is necessary to prevent undue hardship to in-vessel digestion operators.

#### Subdivision (c)

This subdivision states that activities that had previously been excluded in accordance with the current regulations may continue to operate until the enforcement agency determines that regulation under this Chapter is required. The enforcement agency shall make this determination no sooner than 120 days and no later than two years from the effective date of these regulations. If the enforcement agency determines that regulation under this Chapter is required, the operator shall comply with this Chapter within two years of that determination. This is necessary to protect the public health, and safety and the environment.

### **§ 17896.4. Permit Name.**

This section is necessary to clarify that any permit issued pursuant to this Article shall be entitled an "In-vessel Digestion Facility Permit" except a permit issued to a medium volume in-vessel digestion facility in § 17896.12.

### **§ 17896.5. Regulatory Tiers Requirements for In-Vessel Digestion Operations and Facilities.**

This section specifies the regulatory tier requirements that apply to In-vessel Digestion Operations and Facilities. Table 1 summarizes the regulatory tiers and requirements and is

necessary to clarify to operators where their operations or facilities fit in the regulatory tier structure.

#### **§ 17896.6. Excluded Activities.**

##### Subdivision (a)

This subdivision is necessary to clarify that the activities listed in this section are not subject to the in-vessel digestion requirements and that nothing in this section precludes the enforcement agency or the Department from inspecting to verify that the activity is being conducted in a manner that qualifies as an excluded activity or from taking any appropriate enforcement action.

##### Subdivision (a)(1)

This subdivision is necessary to clarify that a Publicly Owned Treatment Works Treatment Plant (POTW Treatment Plant) that receives vehicle-transported solid waste that is an anaerobically digestible material for the purpose of anaerobic co-digestion with POTW Treatment Plant wastewater is excluded if meet meets the conditions specified in subdivisions (a)(1)(A) through (C).

##### Subdivision (a)(1)(A)

This subdivision clarifies that a POTW Treatment Plant is excluded if the anaerobically digestible materials is trucked or hauled into a POTW Treatment Plant and the material is pumped or off-loaded directly into a covered, leak-proof container and then pumped, or diluted or slurried and then pumped, and co-digested in an anaerobic digester(s) at the POTW Treatment Plant. This is necessary to clarify that the anaerobically digestible material must be processed and conveyed in a contained system to protect public health and safety and the environment.

##### Subdivision (a)(1)(B)

This subdivision clarifies that a POTW Treatment Plant is excluded if it has developed Standard Operating Procedures for the acceptance of anaerobically digestible material, the POTW Treatment Plant has notified the Regional Water Quality Control Board that those Standard Operating Procedures are being implemented, and a Standard Provision that reflects the acceptance of anaerobically digestible material has been incorporated or will be incorporated into the POTW Treatment Plant's Waste Discharge Requirements or National Pollutant Discharge Elimination System permit. This is necessary to ensure that the POTW Treatment Plant implements appropriate management practices to protect public health and safety and the environment.

##### Subdivision (a)(1)(C)

This subdivision specifies that "anaerobically digestible material" means: inedible kitchen grease as defined in § 19216 of the Food and Agricultural Code, food material as defined in Title 14, CCR, § ~~17582~~17896.2(a)(2012) and vegetative food material as defined in Title 14, CCR, § ~~17582~~(2017896.2(a)(12)(A). This is necessary to clarify that only these types of materials can be co-digested at a POTW Treatment Plant to protect public health and safety and the environment.

##### Subdivision (a)(1)(D)

This subdivision clarifies the review/approval process and timelines for adding other types of organic materials as potential "anaerobically digestible material" beyond those specified in § 17896.6(a)(1)(C). This is necessary to ensure that the Department, State Water Resources Control Board, and California Department of Food and Agriculture participate in determining

what additional types of organic materials can be safely co-digested at a POTW Treatment Plant to protect public health and safety and the environment.

Subdivision (a)(2)

This subdivision describes the conditions in which the in-vessel digestion of agricultural material is excluded from regulation. This is necessary because such activities pose an insignificant risk to the public health and safety and the environment, since they are predominantly located in remote areas surrounded by other agricultural activities and usually handle materials that are less likely to include contaminants.

Subdivision (a)(3)

This subdivision describes the conditions in which in-vessel digestion at a dairy is excluded from regulation.

Subdivision (a)(3)(A)

This subdivision describes the condition in which in-vessel digestion at a dairy is excluded from regulation. This is necessary to clarify that the anaerobically digestible material must be processed and conveyed in a contained system to protect public health and safety and the environment.

Subdivision (a)(3)(B)

This subdivision describes the condition in which an in-vessel digestion at a dairy is excluded from regulation.

Subdivision (a)(4)

This subdivision is necessary to specify that in-vessel digestion activities with less than 100 cubic yards of solid waste, feedstock, and digestate on-site are excluded. This activity poses little risk to the public health and safety and the environment.

It is important to note persons handling solid waste under this exclusion are obligated to obtain all permits, licenses, or other clearances that may be required by other regulatory agencies including, but not limited to, local health entities and local land use authorities.

Subdivision (a)(45)

This subdivision clarifies the conditions in which rendering activities authorized by the California Department of Food and Agriculture pursuant to § 19300 of the Food and Agricultural Code are excluded from regulation.

Subdivision (a)(6)

This subdivision specifies that some handling activities could be excluded if the activities are already subject to more stringent handling requirements under Federal or State law, as determined by the enforcement agency in consultation with the Department. This is necessary to provide the enforcement agency with discretion to exclude activities that pose minimal threat to public health and safety and the environment.

**§ 17896.7. Prohibitions.**

Certain materials, such as unprocessed mammalian tissue, may present a threat to public health, and safety, and the environment if they are processed in an in-vessel digester. This subdivision is adapted from an existing compostable materials handling regulation [§ 17855.2] and is necessary to explicitly prohibit the in-vessel digestion of certain materials at in-vessel digestion operations and facilities and at all sites where in-vessel digestion sites are excluded

from regulation under this Chapter.

Subdivision (a)

Subdivision (a) is necessary to clarify that the in-vessel digestion of unprocessed mammalian tissue is prohibited except when received from sources specified in Subdivision (a)(1) through (a)(3) exceptions. These exceptions pose minimal threat to public health and safety and the environment.

Subdivision (a)(1)

This subdivision is necessary to clarify that the in-vessel digestion of unprocessed mammalian is allowable if the material is received from a food facility as defined in Health and Safety Code § 113789.

Subdivision (a)(2)

This subdivision is necessary to clarify that the in-vessel digestion of unprocessed mammalian is allowable if the material is received as part of a research activity for the purpose of obtaining data on pathogen reduction or other public health and safety, animal health and safety, or environmental concerns.

Subdivision (a)(3)

This subdivision is necessary to clarify that the in-vessel digestion of unprocessed mammalian is allowable if the material is received from a source and processed by a facility approved by the Department in consultation with the State Water Resources Control Board and the California Department of Food and Agriculture on a case-by-case basis.

Subdivision (b)

This subdivision specifies that treated or untreated medical waste is prohibited at in-vessel digestion operations and facilities and at all sites where in-vessel digestion activities are excluded from regulation under this Chapter and is necessary to protect public health and safety, animal health and safety, and the environment.

Subdivision (c)

This subdivision specifies that hazardous waste is prohibited at in-vessel digestion operations and facilities and at all sites where in-vessel digestion activities are excluded from regulation under this Chapter and is necessary to protect public health and safety, animal health and safety, and the environment.

**§ 17896.8. Research In-Vessel Digestion Operations.**

Subdivision (a)

This subdivision is adapted from an existing compostable material handling regulation [§ 17862)] and clarifies that research in-vessel digestions operations are subject to the Enforcement Agency Notification requirements and are limited to 5,000 cubic yards of material on-site, which is necessary to protect public health and safety, animal health and safety, and the environment.

Subdivision (b)

This subdivision is adapted from an existing compostable material handling regulation [§ 17862)] and requires research in-vessel digestion operations to provide research objectives, methodology to be employed, data to be gathered, analyses to be performed, how the requirements of this subchapter will be met, and a projected timeframe for completing the

research. This necessary to ensure that actual meaningful research is performed at such operations.

#### Subdivision (c)

Subdivision (c) requires a research in-vessel digestion operation to submit a report to the enforcement agency that includes the results and conclusions drawn from the research after no longer than a 2 year period of operation. This provides the enforcement agency with discretion to allow further research for a maximum of two years or not allow further research and require the operator to conduct site restoration at the facility- or direct the operator to obtain appropriate approvals to continue operations. This is necessary to ensure that meaningful research is performed at such operations.

#### Subdivisions (d) and (d)(1) and (2)

These subdivisions are adapted from an existing compostable material handling regulations [§ 17862] and require research in-vessel digestion operations that compost unprocessed mammalian tissue to use unprocessed mammalian tissue generated only from on-site agricultural operations, and all products derived from unprocessed mammalian tissue to be beneficially used on-site. This is necessary to protect public health and safety, animal health and safety, and the environment.

#### Subdivision (d)(3)

This subdivision requires a research in-vessel digestion operation using unprocessed mammalian tissue as feedstock to submit a report to the enforcement agency that includes the results and conclusions drawn from the research after no longer than a 6 month period of operation. Additional language provides the enforcement agency with discretion to allow further research for a maximum of two years or not allow further research and require the operator to conduct site restoration at the facility- or direct the operator to obtain appropriate approvals to continue operations. This is necessary to ensure that meaningful research is performed at such operations.

#### Subdivision (e)

Subdivision (e) is adapted from an existing compostable material handling regulation [§ 17862] and requires the operator to submit all additional documentation required by subdivisions (b) and (d)(2) to the enforcement agency prior to the digestion of any feedstock. This allows the enforcement agency to determine if the information submitted by the operator is complete and correct and is necessary to protect public health and safety and the environment.

#### Subdivision (f)

These revisions are necessary to clarify and standardize the requirement for enforcement agency inspections, which will assist operators understand the requirements that apply to their sites. The flexibility in inspection frequency provided by this subdivision is necessary to prevent unnecessary regulation of operations that pose minimal risk to the public health and safety and the environment.

### **§ 17896.9. Dairy In-Vessel Digestion Operations.**

#### Subdivision (a)

This subdivision is necessary to make clear that dairy in-vessel digestion operations are subject to the Enforcement Agency Notification requirements. Regional Water Quality Control Board regulatory oversight (through Waste Discharge Requirements) of dairy in-vessel digestion operations partially addresses potential impacts to public health, and safety, and the

environment associated with the receipt, handling, digestion, and residual solids management of solid waste co-digested with manure. It is important to note that only co-digestion activities at the dairy are being regulated, not the dairy itself.

Subdivision (a)(1)

This subdivision clarifies that dairy in-vessel digesters will be inspected by the enforcement agency at least once a month for the first 12 months of operation, and the enforcement agency may approve, with Department concurrence, a reduced inspection frequency of once every 3 months. After the first 24 months of operation, the enforcement agency may approve, with Department concurrence, a reduced inspection frequency of once per calendar year. The enforcement agency may approve a reduced inspection frequency only if it will not pose an additional risk to public health and safety or the environment. This subdivision is necessary to ensure that dairy in-vessel digesters have adequate regulatory oversight in the first 2 years of operation to verify that these operations pose a minimal risk to public health and safety and the environment.

Subdivision (a)(2)

This is necessary to clarify that the anaerobically digestible material must be processed and conveyed in a contained system to protect public health and safety and the environment.

**§ 17896.10. Distribution Center In-Vessel Digestion Operations.**

Subdivision (a)

This subdivision is necessary to make clear distribution center in-vessel digestion operations are subject to the Enforcement Agency Notification requirements. The environmental impacts associated with these operations are minimal and only require an Enforcement Agency Notification.

Subdivision (a)(1)

This subdivision also makes clear the frequency of inspection of the operations by the enforcement agency, and the flexibility in inspection frequency provided is necessary to prevent unnecessary regulation of operations that pose minimal risk to the public health and safety and the environment.

**§ 17896.11. Limited Volume In-Vessel Digestion Operations.**

Subdivision (a)

This subdivision is necessary to make clear that limited volume in-vessel digestion operations are subject to the Enforcement Agency Notification requirements. The environmental impacts associated with these operations are minimal and only require an Enforcement Agency Notification.

Subdivision (a)(1)

This subdivision also makes clear the frequency of inspection of the operations by the enforcement agency, and the flexibility in inspection frequency provided is necessary to prevent unnecessary regulation of operations that pose minimal risk to the public health and safety and the environment.

**§ 17896.12. Medium Volume In-Vessel Digestion Facilities.**

This section is necessary to make clear that medium volume in-vessel digestion facilities are subject to the Registration Permit requirements and shall be inspected monthly.

**§ 17896.13. Large Volume In-Vessel Digestion Facilities.**

This section is necessary to make clear that large volume in-vessel digestion facilities must obtain a Full Solid Waste Facilities Permit, these facilities will be inspected monthly, and the In-vessel Digestion Report constitutes the Report of Facility Information.

**§ 17896.14. In-Vessel Digestion Facility Plan.**

This section requires an operator of a medium volume in-vessel digestion facility to file an “In-vessel Digestion Facility Plan” with the enforcement agency. This section is necessary to ensure that the enforcement agency receives sufficient information for determining if the information submitted is complete and correct.

**§ 17896.15. In-Vessel Digestion Report.**

Subdivision (a)

This subdivision requires an operator to file an In-vessel Digestion Report with the enforcement agency. This is necessary so that the enforcement agency can assess potential negative impacts to public health and safety and the environment and verify that the facility will be able to comply with the state minimum standards.

Subdivisions (a)(1) and (2)

These subdivisions are necessary to clarify that when an operator proposes to change the facility's operations or solid waste facility permit, the operator must either submit the updated information as an amendment to the existing In-vessel Digestion Report or submit a complete In-vessel Digestion Report.

**§ 17896.16. Applicability of State Minimum Standards.**

In-vessel digestion operations and facilities could negatively impact public health and safety and the environment if they are not operated properly. Articles 1 through 6 of this Chapter set forth the minimum standards that apply to in-vessel digestion operations and facilities. Department staff employed a general methodology in developing the minimum standards that utilizes environmental indicators whose thresholds would be exceeded by an in-vessel digestion operation or facility and the associated mitigation measures to help determine what standards are necessary to address potential impacts. Reducing regulatory overlap and duplication between the Department and other agencies are also addressed by the methodology. The standards are primarily performance standards, providing the operator and the enforcement agency greater flexibility in meeting the Department's minimum standards.

Subdivision (a)

Subdivision (a) is necessary to make clear to the enforcement agency and operator the minimum standards that apply to all in-vessel digestion operations and facilities.

Subdivision (b)

Subdivision (b) is necessary to make clear to the enforcement agency and operator, which additional minimum standards will apply only to in-vessel digestion facilities.

Subdivision (c)

Subdivision (c) is necessary to make clear that the enforcement agency must provide to the operator in writing all approvals, determinations and other requirements and that the operator must keep a copy of each approval, determination and other requirements in the operating record.

Subdivision (d)

Subdivision (d) is necessary to make clear to the enforcement agency and operator that the enforcement agency is allowed to approve an alternate method of compliance with, but not change, the standards when specified in regulation.

## **Article 2. Siting and Design**

### **§ 17896.17. Siting On Landfills.**

§ 17896.17 is adapted from an existing transfer station regulation [§ 17406.1]. In-vessel digestion operations and facilities may be constructed on landfills, which offer a broad range of substrates (ground). Upon initial observation, these substrates may appear satisfactory for use, but over time, could prove unsatisfactory. The substrate could settle unevenly, resulting in fractured work surfaces. Some substrates are vulnerable to liquefaction resulting from seismic events or water saturation, leading to possible structural or foundation damage.

Subdivisions (a), (b) and (c)

Subdivisions (a), (b), and (c) are necessary to control the siting of in-vessel digestion operations and facilities on landfills. Soil type and stability requirements reduce the possibility of damage to operation or facility grounds and structures. In-vessel digestion operations and facilities located on closed landfills must comply with post-closure land-use requirements pursuant to California Code of Regulations, Title 27, Subdivision 1, Chapter 3, Subchapter 5, Article 1, § 21190. These subdivisions are simply acknowledging an activity that may already be authorized by regulation.

### **§ 17896.18. General Design Requirements.**

§ 17896.18 is adapted from an existing transfer station regulation [§ 17406.2].

Subdivisions (a) and (b)

Subdivisions (a) and (b) are necessary for the protection of the public health and safety and the environment and for purposes of enforcement to make clear to the operator as well as the enforcement agency that the design of in-vessel digestion operations and facilities shall take into consideration noise control, odor control, vector control, public safety, and other pertinent matters related to the protection of public health.

Subdivision (c)

Subdivision (c) is necessary for protection of the public health and safety and the environment and for purposes of enforcement to make clear to the operator as well as the enforcement agency that the design of in-vessel digestion operations and facilities shall take into consideration, noise control, odor control, vector control, public safety, and other pertinent matters related to the protection of public health.

Subdivision (d)

Subdivision (d) is necessary for protection of the public health and safety and the environment and for purposes of enforcement that the enforcement agency may require the operator to describe how the facility has complied with applicable local and state requirements regarding odor control measures, personnel health and safety, and sanitary facilities.

Subdivision (e)

Subdivision (e) is necessary for the protection of public health and safety and the environment by ensuring that waste storage containers are durable, easily cleanable, and designed to

prevent the loss of wastes during handling and storage.

### **Article 3. Operating Standards for In-Vessel Digestion Operations and Facilities**

#### **§ 17896.19. Biogas Control.**

§ 17896.19 is necessary to ensure that the uncontrolled release of biogas, such as carbon dioxide, hydrogen, and methane, from an in-vessel digestion operation or facility is ~~minimized~~prevented to protect on-site users as well as the public health and safety and the environment.

#### **§ 17896.20. Cleaning.**

§ 17896.20 is adapted from an existing transfer station regulation [§ 17407.2.] concerning cleaning that is necessary to ensure that in-vessel digestion operations and facilities are operated in a manner that protects public health and safety and the environment.

Subdivision (a)(1) and (2)

Subdivision (a) is necessary for protection of public health and safety and the environment, and for purposes of enforcement to make clear to the operator and to the enforcement agency that the standard frequency for maintaining clean storage containers and facilities and criteria to be met if an alternative frequency is to be established.

Subdivision (b)

Subdivision (b) is necessary for protection of public health and safety and the environment, and for purposes of enforcement to make clear to the operator and enforcement agency that the entrance of exit of the operation or facility shall be cleaned to prevent off-site tracking or migration of waste materials.

#### **§ 17896.21. Drainage and Spill Control.**

Subdivision (a) (1) through (5)

This subdivision is adapted from an existing transfer station regulation [§ 17407.3] concerning drainage control, and for purposes of enforcement, to make clear to the operator and to the enforcement agency the performance standards that must be met regarding drainage control. This is necessary to ensure that in-vessel digestion operations and facilities are operated in a manner that protects public health and safety and the environment.

Subdivision (b)

This subdivision is necessary to ensure that the operator implements measures to prevent spillage and promptly responds to any leaks or spills that occur to protect public health and safety and the environment.

#### **§ 17896.22. Dust Control.**

§ 17896.22 is adapted from an existing transfer station regulation [§ 17407.4.] concerning dust control that is necessary to ensure that in-vessel digestion operations and facilities are operated in a manner that protects public health and safety and the environment.

Subdivision (a)(1) through (4)

Subdivision (a) is necessary for protection of public health and safety and the environment, and for purposes of enforcement to make clear to the operator and to the enforcement agency specific conditions which dust control is required. In the past, due to the general nature of the standard, disputes arose regarding what was considered excessive dust. This standard is

intended to be more specific and to provide guidance to inspectors in determining what constitutes a dust problem.

**§ 17896.23. Hazardous, Liquid, and Special Wastes.**

This is adapted from an existing transfer station regulation [§ 17407.5] concerning the receipt of hazardous wastes.

Subdivision (a)

Subdivision (a) is necessary for protection of public health and safety and the environment, and for purposes of enforcement to make clear to the operator and to the enforcement agency that the receipt and handling of liquid wastes and hazardous wastes may not be accepted at an in-vessel digestion operation or facility unless approved by all appropriate regulatory agencies. It also informs the operator that there are other regulatory agencies governing the receipt and handling of hazardous wastes.

Subdivision (b)

Subdivision (b) is necessary for protection of public health and safety and the environment, and for purposes of enforcement to make clear to the operator and to the enforcement agency that the operator must eliminate or control dusts, fumes, mists, vapors or gases prior to final disposition of the material.

Subdivision (c)

Subdivision (c) is necessary for protection of public health and safety and the environment, and for purposes of enforcement to make clear to the operator and to the enforcement agency that the receipt or storing of liquid wastes and sludges may not be accepted at an in-vessel digestion operation or facility unless approved by all appropriate regulatory agencies.

**§ 17896.24. Litter Control.**

§ 17896.24 is adapted from an existing transfer station regulation [§ 17408.1] concerning litter control that is necessary to ensure that in-vessel digestion operations and facilities are operated in a manner that protects public health and safety and the environment and for purposes of enforcement to make clear to the operator and to the enforcement agency the performance standards to be met for litter control.

**§ 17896.25. Load Checking.**

Subdivisions (a) (1) through (3)

§ 17896.25 is adapted from an existing transfer station regulation [§ 17409.5] concerning load checking that is necessary to ensure that in-vessel digestion operations and facilities are operated in a manner that protects public health and safety and the environment and for purposes of enforcement to make clear to the operator and to the enforcement agency the performance standards to be met for load checking. The proper handling of household hazardous waste or hazardous waste must meet local Hazmat requirements.

**§ 17896.26. Maintenance Program.**

§ 17896.26 is adapted from an existing transfer station regulation [§ 17408.6] concerning maintenance that is necessary for protection of the public health and safety and the environment and for purposes of enforcement to make clear to the operator and enforcement agency that the operator is responsible for maintenance and repair of equipment and operations and facilities.

**§ 17896.27. Medical Wastes.**

§ 17896.27 is adapted from an existing transfer station regulation [§ 17408.2] concerning treated or untreated medical wastes and, for purposes of enforcement, to make clear to the operator and enforcement agency that the receipt of medical waste is prohibited. This is necessary for protection of the public health and safety and the environment.

**§ 17896.28. Noise Control.**

§ 17896.28 is adapted from an existing transfer station regulation [§ 17408.3] concerning noise control and is necessary for protection of public health and safety and the environment, and for purposes of enforcement to make clear to the operator and to the enforcement agency that health hazards due to excessive noise must be prevented. Experience by Department staff has shown that it has not always been possible to prevent noise impacts. This standard is intended to be more specific and to provide guidance to inspectors in determining what constitutes a noise violation.

**§ 17896.29. Non-Salvageable Items.**

§ 17896.29 is adapted from an existing transfer station regulation [§ 17408.4] and is necessary for protection of the public health and safety and the environment and for purposes of enforcement to make clear to the operator and enforcement agency that certain potentially hazardous items received as solid waste may not be salvaged without approval from the enforcement and local health agencies.

**§ 17896.30. Odor Best Management Practice Feasibility Report.**

Subdivision (a)

This subdivision is necessary to specify that an operator may voluntarily prepare an Odor Best Management Practice Feasibility Report (Report) or the enforcement agency may require the operator to prepare a Report after consecutive or chronic odor violations as determined pursuant to § 17896.31(f). The Report is designed to provide more reliable odor data to the enforcement agency than what is currently required in the Odor Impact Minimization Plan as specified in § 17896.31.

Subdivisions (b)(1) through (3)

These subdivisions specify what the operator should include in the Odor Best Management Practice Feasibility Report, such as data on potential onsite odor sources, identification and ranking of on-site odor sources, a list and analysis of each best management practice used, and a list and analysis of all potential best management practices the operator has not used. The operator will also develop a plan and schedule for implementing the best management practices that are recommended. These requirements are necessary so that the operator accurately identifies odor sources/impacts and develops best management practices to mitigate odors for the protection of public health and safety and the environment.

Subdivision (c)

This subdivision requires the operator to submit the Odor Best Management Practice Feasibility Report as required by subdivisions (a) and (b) and the plan and schedule to the enforcement agency and the Department for review. If the enforcement agency has required the operator to prepare an Odor Best Management Practice Feasibility Report, the operator must submit the plan and schedule within 14 days or other timeframe approved by the enforcement agency. These requirements are necessary to ensure that the enforcement agency and Department review the Report in a timely manner.

Subdivision (d)(1) and (2)

This subdivision specifies that, within 30 days, the enforcement agency, in consultation with the Department, shall approve the Odor Best Management Practice Feasibility Report and direct the operator to implement the plan and/or submit changes or additional information. This is necessary to make clear to the enforcement agency the timeline and procedures for processing the Odor Best Management Practice Feasibility Report submitted by the operator.

Subdivision (e)

The subdivision specifies that the enforcement agency may issue a Notice and Order pursuant to § 17896.31(f) to process the Odor Best Management Practice Feasibility Report. The enforcement agency's ability to issue a Notice and Order is necessary to ensure that an operator will implement or submit changes to the plan in the Odor Best Management Practice Feasibility Report to reduce odors, which will protect public health and safety and the environment.

**§ 17896.31. Odor Minimization Plan.**

One of the greatest threats to the viability of the in-vessel digestion industry is the negative public perception caused by odors. Along with the anticipated increase of in-vessel digestion of food material (to help meet AB 341 recycling goals) and the steady urbanization of California, comes an increased likelihood of odor complaints. § 17896.31, adapted from an existing compostable materials handling regulation 17863.4, sets forth the requirements that in-vessel digestion operations and facilities must meet to minimize odor impacts. The Department intends for all in-vessel digestion operations and facilities (unless exempt from this requirement) to have a complete odor impact minimization plan on the effective date of these regulations.

Subdivision (a)

Subdivision (a) requires all in-vessel digestion operations and facilities to submit a complete, site-specific odor impact minimization plan (OIMP) with the enforcement agency with the Enforcement Agency Notification or permit application. This is necessary to ensure that reasonable methods to minimize odor are considered in advance.

Subdivisions (b)(1) through (5)

Subdivision (b) is used to set the minimum requirements that the odor impact minimization plan must meet. This is necessary to ensure that each OIMP is complete and includes an odor monitoring protocol, an assessment of local meteorological conditions, a complaint response protocol and a full description of the operating and design procedures for minimizing odor. This sets a benchmark of evaluation and enforcement by the enforcement agency.

Subdivision (c)

Subdivision (c) requires that any changes to the odor impact minimization plan be conveyed to the enforcement agency in a timely manner. This is necessary to ensure that a reasonable OIMP will be in place at all times and that the enforcement agency is informed of changes.

Subdivision (d)

Subdivision (d) requires an annual review of the OIMP by the local enforcement agency. This is necessary to ensure that odor impact minimization plans are kept current.

Subdivision (e)

Subdivision (e) allows the enforcement agency to use the OIMP to determine whether or not the operation or facility is following the procedures established by the operator. It further gives the enforcement agency authority to issue a Notice and Order if the OIMP is not being followed.

This is necessary to ensure operator compliance with odor impact minimization plans. The primary goal of the OIMP is to prevent odor impacts from occurring, and therefore, the enforcement agency must be able to require an operator to adhere to their OIMP.

Subdivisions (f) (1) through (3)

These subdivisions specify that if the odor impact minimization plan is being followed and the enforcement agency determines that odor impacts are still occurring, the enforcement agency shall direct the operator to prepare and implement an Odor Best Management Practice Feasibility Report. The enforcement agency shall consider the results of the Report prior to issuing a Notice and Order requiring the operator to take additional reasonable and feasible measures to minimize odors, unless the enforcement agency has evidence that a specific and immediate action would reduce the odor impacts and there is an imminent threat to public health and safety and the environment; or a ~~public~~-nuisance has occurred. These requirements are necessary to ensure that the operator implements odor mitigation measures to protect public health and safety and the environment.

**§ 17896.32. Odor and Nuisance Control.**

This subdivision is necessary for protection of public health and safety and the environment, and for purposes of enforcement to make clear to the operator and to the enforcement agency that in-vessel digestion operations and facilities must minimize and prevent odors and not create a nuisance. Experience by Department staff has shown that it is difficult to determine if odor minimization activities implemented by an operator are sufficient to reduce odors below a “nuisance” level. This standard is intended to be more specific by requiring the operator to minimize odors so as not to create a nuisance as defined in § 17896.2(a)(18).

**§ 17896.33. Parking.**

§ 17896.33 is adapted from an existing transfer station regulation [§ 17409.6] and is necessary for protection of public health, ~~and~~ safety, and the environment, and for purposes of enforcement to make clear to the operator and to the enforcement agency that parking at in-vessel digestion operations/facilities is to be provided.

**§ 17896.34. Personnel Health and Safety.**

§ 17896.34 is adapted from an existing transfer station regulation [§ 17408.7] and is necessary for the safety of personnel working at in-vessel digestion operations and facilities and to make clear to the operator and the enforcement agency that safety equipment is required.

**§ 17896.35. Pre-Digestion Solid Waste Handling.**

Subdivision (a)

This subdivision is necessary to specify that putrescible wastes must be injected into an in-vessel digester or stored in a sealed container or sealed structure or removed from the site within 48 hours from the time of receipt. Putrescible wastes can cause odors and attract vectors, and this 48 hour requirement will protect public health and safety and environment, while making clear to the operator and enforcement agency the maximum storage time for solid wastes.

Subdivision (b)

This subdivision is necessary to specify that all non-putrescible wastes not intended for digestion must be removed within 7 days from the date of receipt or at an alternate frequency approved by the enforcement agency. Non-putrescible wastes do not generate odors and

attract vectors as much as putrescible wastes, and consequently, non-putrescible wastes can be stored for a 7 days without posing a threat to public health and safety and the environment.

**§ 17896.36. Protection of Users.**

§ 17896.36 is adapted from an existing transfer station regulation [§ 17408.8] and is necessary for protection of public health and safety, and for purposes of enforcement to make clear to the operator and to the enforcement agency that contact between users of the in-vessel digestion operation or facility as well as site personnel shall be minimized; methods for achieving that aim are listed for clarity.

**§ 17896.37. Roads.**

§ 17896.37 is adapted from an existing transfer station regulation [§ 17409.1] and is necessary for protection of public health and safety and the environment, and for purposes of enforcement to make clear to the operator and to the enforcement agency that roads and driveways shall be accessible, and not be sources of dust or litter. The intent of the regulation is to allow for safety and accessibility; removal of litter and other loose materials is covered by the standard for litter control.

**§ 17896.38. Sanitary Facilities.**

§ 17896.38 is adapted from an existing transfer station regulation [§ 17409.2] and is necessary for protection of public health and safety and for purposes of enforcement to make clear to the operator and the enforcement agency that sanitary facilities are required at in-vessel digestion operations and facilities.

**§ 17896.39. Scavenging and Salvaging**

Subdivisions (a) through (d)

§ 17896.39 is adapted from an existing transfer station regulation [§ 17409.3] and is necessary for protection of the public health and safety and the environment, and for purposes of enforcement to make clear to the operator and enforcement agency that scavenging is prohibited at all in-vessel digestion operations and facilities, that salvaging is to be a planned activity and carried out in a controlled manner, that there is a storage requirement for salvaged materials, and that there is a maximum storage time for salvaged material. Experience has shown that storage of salvage materials can result in other health and safety impacts, e.g., nuisance.

**§ 17896.40. Signs.**

§ 17896.40 is adapted from an existing transfer station regulation [§ 17409.4] and is necessary for protection of public health and safety and the environment, and for purposes of enforcement to make clear to the operator and to the enforcement agency that an in-vessel digestion operation and facility shall be easily located by posting a clearly-visible sign; the public shall be informed as to hours of operation, acceptable waste types and fees; and the operator's telephone number shall be listed on the sign in the event of questions, problems, or emergencies.

**§ 17896.41. Site Restoration.**

Current regulations [§ 17870] regarding site restoration only apply to compostable materials handling operations and facilities. In-vessel digestion operations and facilities pose the same risk to public health, and safety and the environment. Therefore, it is reasonable to require similar site restoration requirements. It is the intent of this subdivision to extend the site restoration requirements to in-vessel digestion operations and facilities.

Subdivisions (a), (b), and (c)

Subdivisions (a), (b), and (c) specify the process for noticing and performing site restoration at in-vessel digestion operations and facilities. These subdivisions are necessary to make clear to the operator and enforcement agency the procedures that will ensure the site is adequately restored to protect public health and safety and the environment.

**§ 17896.42. Supervision and Personnel.**

§ 17896.42 is adapted from an existing transfer station regulation [§ 17410.2] and is necessary for protection of public health and safety and the environment and for purposes of enforcement to specify to the operator and enforcement agency the supervision requirements to execute functions at in-vessel digestion operations and facilities.

**§ 17896.43. Training.**

§ 17896.43 is adapted from an existing transfer station regulation [§ 17410.3] and is necessary for protection of public health and safety and the environment and for purposes of enforcement to specify to the operator and enforcement agency that personnel shall be trained in all subjects that are relevant to in-vessel digestion operation, maintenance, and public health and safety matters. Training in hazardous materials recognition and screening is important to educate personnel in the safe recognition and removal of these materials from the waste stream with the intent of preventing and/or minimizing hazards to public health and safety.

**§ 17896.44. Vector, Bird and Animal Control.**

§ 17896.44 is adapted from an existing transfer station regulation [§ 17410.4] and is necessary for protection of public health and safety and the environment and for purposes of enforcement to make clear to the operator and enforcement agency that the propagation of vectors and other agents capable of transmitting disease shall be controlled and/or prevented.

**Article 4. Record Keeping Requirements**

**§ 17896.45. Record Keeping Requirements.**

Subdivision (a)

§ 17896.45 is adapted from an existing transfer station regulation [§ 17414] and existing compostable materials handling regulation [§ 17869] and is necessary to provide information to the enforcement agency and the Department so that compliance with the proposed regulations can be determined.

Subdivision (b)

This subdivision is necessary to provide the enforcement agency and the Department, and other duly authorized regulatory or enforcement agency's reasonable access to information regarding operator, operation, and/or facility compliance with the propose regulations. This subdivision requires the operator to keep all records required by the proposed regulations in one location and that these records be kept for a period of five years.

Subdivision (c)

This subdivision is necessary to provide information to the enforcement agency so that compliance with the proposed regulations can be determined.

Subdivision (d)

This subdivision is necessary to provide information to the enforcement agency and the

Department so that compliance with the proposed regulations can be determined. This subdivision requires the operator to maintain a log of special occurrences encountered during operation. The operator is required to record the methods used to resolve these special occurrences.

Subdivision (e)(1) through (4)

These subdivisions are necessary to provide information to the enforcement agency and the Department so that compliance with the proposed regulations can be determined. An enforcement agency is only able to observe an operation or facility during an inspection and must rely on other sources of information to determine compliance, including written public complaints that are recorded by the operator. The surrounding public, by their ongoing presence, may be impacted by violations that are not apparent to the enforcement agency during an inspection. Therefore, the recording of public complaints, or the lack thereof, is a good source of information that the enforcement agency may use to verify compliance or noncompliance.

Subdivision (f), (g), (h), and (i)

These subdivisions are necessary to provide information to the enforcement agency (and the Department when specified) so that compliance with the proposed regulations can be determined.

**§ 17896.46. Documentation of Enforcement Agency Approvals, Determinations, and Requirements.**

§ 17896.46 is adapted from an existing transfer station regulation [§ 17414.1] and is necessary to provide the enforcement agency, the Department, and other duly authorized regulatory or enforcement agency's information regarding operator, operation, and/or facility compliance with the proposed regulations.

**Article 5. Additional Operating Requirements for In-Vessel Digestion Facilities Only**

**§ 17896.47. Communications Equipment.**

This is adapted from an existing transfer station regulation [§ 17415.1] and is necessary for protection of public health and safety and the environment and for enforcement to make clear to the operator that adequate communication equipment is available to site personnel in the advent of an emergency.

**§ 17896.48. Equipment.**

This is adapted from an existing transfer station regulation [§ 17416.3] and is necessary for protection of public health and safety and the environment and for enforcement to make clear to the operator that adequate operational equipment is available to site personnel.

**§ 17896.49. Fire Fighting Equipment.**

This is adapted from an existing transfer station regulation [§ 17415.2] and is necessary for protection of public health and safety and the environment and for enforcement to make clear to the operator that adequate fire suppression equipment is available to site personnel in the advent of an emergency.

**§ 17896.50. Housekeeping.**

This is adapted from an existing transfer station regulation [§ 17416.1] and is necessary for protection of public health and safety and the environment and for enforcement to make clear to the operator that adequate housekeeping is maintained to reduce safety hazards.

**§ 17896.51. Lighting.**

This is adapted from an existing transfer station regulation [§ 17416.2] and is necessary for protection of public health and safety and the environment and for enforcement to make clear to the operator that adequate lighting equipment is available to site personnel.

**§ 17896.52. Site Attendant.**

This is adapted from an existing transfer station regulation [§ 17418.2] and is necessary for protection of public health and safety and the environment and for enforcement to make clear to the operator that an adequate site attendant be available during operating hours.

**§ 17896.53. Site Security.**

This is adapted from an existing transfer station regulation [§ 17418.1] and is necessary for protection of public health and safety and the environment and for enforcement to make clear to the operator that adequate site security is maintained to discourage unauthorized access by persons or vehicles.

**§ 17896.54. Traffic Control.**

Subdivisions (a)(1) through (3)

This is adapted from an existing transfer station regulation [§ 17418.3] and is necessary for protection of public health and safety and the environment and for enforcement to make clear to the operator that adequate traffic control is maintained to prevent hazards from occurring.

**§ 17896.55. Visual Screening.**

This is adapted from an existing transfer station regulation [§ 17419.1] and is necessary for appropriate treatment of areas open to public view and for enforcement to make clear to the operator that adequate visual screening is maintained to maintain an attractive and aesthetically acceptable appearance.

**§ 17896.56. Water Supply.**

This is adapted from an existing transfer station regulation [§ 17419.2] and is necessary for protection of public health and safety and the environment and for enforcement to make clear to the operator that an adequate water supply is maintained to prevent hazards from occurring and to provide a safe and adequate water supply for drinking.

**Article 6. Digestate Handling Standards**

**§ 17896.57. Digestate Handling.**

This section is necessary to specify that digestate that is not contained in an in-vessel digester must, within 24 hours, be handled in one of 3 methods as specified in subdivisions (a)(1) through (a)(3).

Subdivision (a)(1)

This subdivision specifies that digestate from an in-vessel digester may be stored or processed on-site in a sealed container or sealed structure unless the enforcement agency approves an alternative handling method. This is necessary to minimize odors and vectors and is protective of public health and safety and the environment. It is necessary to allow the enforcement agency to approve compliance alternatives because there may be methods that are equally effective in meeting the performance of the specified method.

#### Subdivision (a)(2)

This subdivision is necessary to specify that digestate from an in-vessel digester may be incorporated in an on-site aerobic compost process. On-site composting of digestate is allowable only at large volume in-vessel digestion facilities that have obtained an In-vessel Digestion Facility Permit pursuant to § 17896.413. Digestate from an in-vessel digester may cause odors and attract vectors, and consequently, an appropriate level of regulatory oversight is necessary to protect public health and safety and the environment. Requiring in-vessel digestion facilities that compost on-site to comply with sampling requirements, maximum metal concentrations, maximum acceptable pathogen concentrations, and physical contamination limits is also necessary to protect public health and safety and the environment.

#### Subdivision (a)(3)(A)

This subdivision specifies that digestate from an in-vessel digester may be removed from the site and either transported as solid waste only to another solid waste facility or operation for disposal, composting, or additional processing or used or disposed in a manner approved by local, state, and federal agencies having appropriate jurisdiction, composting or disposal. This is necessary to ensure that digestate that is removed from the site is handled safely to protect public health and safety and the environment.

#### Subdivision (a)(3)(B) and (C)

These subdivisions specify that digestate from an in-vessel digester may be used in a manner approved by local, state, and federal agencies having appropriate jurisdiction. Any digestate that will be land applied must meet the requirements of § 17852(a)(24.5).

Digestate from an in-vessel digester may be disposed of in a manner as set forth in the consolidated regulations for the Treatment, Storage, Processing or Disposal of Solid Waste (commencing at 27 CCR § 20005).

#### Subdivision (b)

This subdivision specifies that digestate that has not been analyzed for metal concentration, pathogen concentration, and physical contaminants or is known to exceed the maximum metal concentrations, pathogen concentrations, or maximum physical contamination limits shall be designated for ~~disposal~~, additional processing, disposal, or other use as approved by local, state agencies having appropriate jurisdiction. This is necessary to ensure that digestate is tested for metal concentrations, pathogen concentrations, and physical contaminants and is properly managed if it exceeds any of these requirements to protect public health and safety and the environment.

### **§ 17896.58. Sampling Requirements.**

#### Subdivision (a)

This subdivision is adapted from an existing compostable materials handling regulation [§ 17868.1 (a)] that specifies an operator must sample compost produced at an in-vessel digestion facility to ensure that compost leaving the site meets the maximum metal concentrations, and pathogen reduction requirements, ~~and physical contamination limits.~~ This is necessary to protect public health and safety and the environment. Department staff is aware of some operators that have sold compost and removed the finished product from the site before the sampletest results of samples were received. Requiring the operator to receive the sampletest results of samples prior to the compost leaving the site will ensure that compost meets the maximum metals concentrations, and pathogen reduction requirements, ~~and physical contamination limits~~ and will protect public health and safety and the environment.

Subdivision (b)(1) and (2)

The sampling requirement is adapted from existing compostable materials handling regulation [§ 17868.1(a)(1) and (a)(3)] and ensures that a composite sample is obtained for every 5,000 cubic yards of compost produced at an in-vessel digestion facility ~~and~~. If the in-vessel digestion facility produces less than 5,000 compost in a 12 month period, then the operator shall analyze at least one composite sample at the end of every 12 month period. The sample analysis for maximum metal concentrations ~~is~~ shall be performed at a certified laboratory. These requirements are necessary to protect public health and safety and the environment.

Subdivision (c)(1) and (2), (A) through (C)

The composite sampling procedure is adapted from an existing compostable materials handling regulation [§ 17868.1 (b)] that ensures a composite sample at an in-vessel digestion facility is representative and random. These requirements are necessary to protect public health and safety and the environment.

Subdivision (d)

The alternative method of sampling is adapted from an existing compostable materials handling regulation [§ 17868.1 (c)]. It is necessary to allow the enforcement agency to approve compliance alternatives because there may be methods that are equally effective in meeting the performance of the specified method.

#### **§ 17896.59. Maximum Metal Concentrations.**

Subdivision (a) and (a)(1)

The maximum metal concentrations requirement is adapted from an existing compostable materials handling regulation [§ 17868.2 (a)] that ensures compost produced at an in-vessel digestion facility meets the maximum metal concentrations requirements and is necessary to protect public health and safety and the environment.

Subdivision (b)

Alternative methods of compliance to meet maximum metal concentrations requirements is adapted from an existing compostable materials handling regulation [§ 17868.2 (b)]. It is necessary to allow the enforcement agency to approve compliance alternatives because there may be methods that are equally effective in meeting the performance of the specified method.

#### **§ 17896.60. Pathogen Reduction.**

Subdivision (a)

Subdivision (a) is adapted from an existing compostable materials handling regulation [§ 17868.3 (a)] that ensures compost produced at an in-vessel digestion facility meets the pathogen reduction requirements and is necessary to protect public health and safety and the environment. Requiring the operator to receive the sampletest results from the samples prior to the compost leaving the site will ensure that compost meets the pathogen reduction requirements and will protect public health and safety and the environment.

Subdivisions (b)(1)

Subdivision (b)(1) is adapted from an existing compostable materials handling regulation [§ 17868.3 (b)(1)] that ensures compost produced at an in-vessel digestion facility meets the fecal coliform and Salmonella sp. Bacteria limits and is necessary to protect public health and safety and the environment.

Subdivisions (b)(2) through (4)

Subdivision (b)(2) through (4) is adapted from existing compostable materials handling regulation [§ 17868.3 (b)(2) through (4)] that ensures active compost at an in-vessel digestion facility reaches pathogen-killing temperatures and those temperatures are maintained. This will ensure that compost produced at an in-vessel digestion facility meets pathogen reduction requirements and is necessary to protect public health and safety and the environment.

Subdivisions (c)(1) and (2)

Subdivision (c)(1) and (2) is adapted from an existing compostable materials handling regulation [§ 17868.3] and is necessary to ensure that temperatures of active compost at an in-vessel digestion are accurately measured and monitored. This will ensure that compost produced at an in-vessel digestion facility will meet the pathogen reduction requirements to protect public health and safety and the environment.

Subdivision (d)

Alternative methods of compliance to meet pathogen reduction requirements is adapted from an existing compostable materials handling regulation [§ 17868.3]. It is necessary to allow the enforcement agency to approve compliance alternatives because there may be methods that are equally effective in meeting the performance of the specified method.

#### **§ 17896.61. Physical Contamination Limits.**

This section shall become operative January 1, 2018.

Subdivision (a)

This is necessary to prevent the land application of compost with excessive physical contaminants, such as glass and plastic, which will protect public health and safety and the environment. The limit on the percentage of physical contaminants is consistent with nationwide trends (the states of Massachusetts, Minnesota, Montana, Ohio, Washington, and Wisconsin, as well as the United Kingdom, have limits on physical contaminants). In California, the Department of Transportation's (Caltrans) Revised Compost Nonstandard Specification 21-1.02M, calls for physical contaminants (plastic, glass, and metal) to be less the 0.5% by dry weight.

"Glass shards (4-mm to 13-mm) can pose a human and animal hazard with unprotected exposure or through direct ingestion. Metal fragments can pose the same hazard, and could be a potential source of trace elements upon interaction with soil. Hard plastic can be an aesthetic concern and in large quantities may affect physical properties of a compost-amended soil, (e.g., soil coloring, heat retention, drainage)." [Test Methods for the Examination of Composting and Compost, Method 03.06 Glass Shards, Metal Fragments and Hard Plastic, pg. 03.06-1 - U.S. Department of Agriculture/U.S. Composting Council]

Compost that does not meet the physical contaminant standard must be ~~disposed~~, processed to remove physical contaminants, disposed, or may be used if approved by local, state or federal agencies having appropriate jurisdiction.

Department staff is aware of some operators that have sold compost and removed the finished product from the site before the sampletest results from the samples were received. Requiring the operator to receive the sampletest results of samples prior to the compost leaving the site

will ensure that compost meets the physical contaminants requirements to protect public health and safety and the environment.

Subdivision (b)

This subdivision specifies that all in-vessel digestion facilities must obtain a ~~representative and random composite~~ sample for every 5,000 cubic-yards of compost produced at the facility ~~and sending a method that provides accurate results and that has been approved by the enforcement agency. If the facility produces less than 5,000 cubic-yards of compost in a 12 month period, the operator shall analyze at least one composite sample to a laboratory to measure physical contaminants of compost produced at the end of every 12 month period.~~

Since in-vessel digestion facilities may accept feedstock with more than 1.0% physical contaminants by weight, this subdivision is necessary to ensure that the finished compost meets the 0.45% physical contaminant limit to protect public health and safety and the environment.

Subdivision (c)

This subdivision is necessary to provide the enforcement agency with the authority to require the operator to take a composite sample of compost in the presence of the enforcement agency and to send the composite sample to a laboratory for analysis. The subdivision includes a testing protocol for the laboratory to determine the percentage of physical contaminants greater than 4 millimeters by dry weight.

Subdivision (d)

The composite sampling procedure is adapted from an existing compostable materials handling regulation [§ 17868.1 (b)] that ensures a composite sample at an in-vessel digestion facility is representative and random. These requirements are necessary to protect public health and safety and the environment.

Subdivision (e)

It is necessary to allow the enforcement agency to approve compliance alternatives because there may be methods that are equally effective in meeting the performance of the specified method.

**Chapter 5. Enforcement of Solid Waste Standards and Administration of Solid Waste Facility Permits; Loan Guarantees.**

**Article 2.2. LEA Performance Standards, Evaluation Criteria, and Duties and Responsibilities**

**§ 18083. LEA Duties and Responsibilities for Inspections.**

Subdivision (a)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

Subdivision (a)(3)

The revision to this subdivision specifies/clarifies the process for approving reduced inspection frequencies at sites that will not pose an additional risk to public health and safety or the environment.

Subdivision (a)(4)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

Subdivision (a)(4)(A)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

Subdivision (a)(5)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

### **Article 3.0. Regulatory Tier Requirements**

#### **§ 18100. Scope.**

Subdivision (b)

The revision to this subdivision is necessary to specify that the provisions of Chapter 5, Article 3.0 (Regulatory Tier Requirements) apply to operations and facilities subject to the newly-created Chapter 3.2 (In-vessel Digestion Operations and Facilities Regulatory Requirements) of Division 7 of Title 14.

#### **§ 18102. Excluded Solid Waste Handling.**

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

#### **§ 18103. Enforcement Agency Notification.**

Subdivision (a)

The revision to this subdivision is necessary to specify that the provisions of Chapter 5, Article 3.0 (Regulatory Tier Requirements) apply to operations and facilities subject to the newly-created Chapter 3.2 (In-vessel Digestion Operations and Facilities Regulatory Requirements) of Division 7 of Title 14.

Subdivision (c)

The revision to this subdivision is necessary to specify that the provisions of Chapter 5, Article 3.0 (Regulatory Tier Requirements) apply to operations and facilities subject to the newly-created Chapter 3.2 (In-vessel Digestion Operations and Facilities Regulatory Requirements) of Division 7 of Title 14.

Subdivision (d)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

#### **§ 18103.1. Filing Requirements.**

Subdivision (a)(2)

The revision to this subdivision is necessary to specify that the provisions of Chapter 5, Article 3.0 (Regulatory Tier Requirements) apply to operations and facilities subject to the newly-created Chapter 3.2 (In-vessel Digestion Operations and Facilities Regulatory Requirements) of Division 7 of Title 14.

**§ 18103.2 Record Keeping Requirements.**

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

**§ 18104. Registration Permit.**

Subdivision (a)

The revision to this subdivision is necessary to specify that the provisions of Chapter 5, Article 3.0 (Regulatory Tier Requirements) apply to operations and facilities subject to the newly-created Chapter 3.2 (In-vessel Digestion Operations and Facilities Regulatory Requirements) of Division 7 of Title 14.

Subdivision (b)

The revision to this subdivision is necessary to specify that the provisions of Chapter 5, Article 3.0 (Regulatory Tier Requirements) apply to operations and facilities subject to the newly-created Chapter 3.2 (In-vessel Digestion Operations and Facilities Regulatory Requirements) of Division 7 of Title 14.

**§ 18104.1. Filing Requirements.**

Subdivision (a)

The revision to this subdivision is necessary to specify that the provisions of Chapter 5, Article 3.0 (Regulatory Tier Requirements) apply to operations and facilities subject to the newly-created Chapter 3.2 (In-vessel Digestion Operations and Facilities Regulatory Requirements) of Division 7 of Title 14.

Subdivision (e)(1) through (2)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

**§ 18104.2. Enforcement Agency Processing Requirements.**

Subdivision (g)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

**§ 18104.3. Record Keeping Requirements.**

Subdivision (c)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

Subdivision (d)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

Subdivision (e)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

**§ 18104.6. Change in Owner.**

Subdivision (a)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

**§ 18104.9. Voiding of a Registration Permit.**

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

**§ 18105. Standardized Permit.**

Subdivision (a)

The revision to this subdivision is necessary to specify that the provisions of Chapter 5, Article 3.0 (Regulatory Tier Requirements) apply to operations and facilities subject to the newly-created Chapter 3.2 (In-vessel Digestion Operations and Facilities Regulatory Requirements) of Division 7 of Title 14.

Subdivision (c)(5)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

**§ 18105.1. Filing Requirements.**

Subdivision (a)

The revision to this subdivision are necessary to specify that the provisions of Chapter 5, Article 3.0 (Regulatory Tier Requirements) apply to operations and facilities subject to the newly-created Chapter 3.2 (In-vessel Digestion Operations and Facilities Regulatory Requirements) of Division 7 of Title 14.

Subdivision (g)(1) and (2)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

**§ 18105.2. Enforcement Agency Processing Requirements.**

Subdivision (g)(3)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

Subdivision (i) and (j)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

**§ 18105.3. Record Keeping Requirements.**

Subdivision (c)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

Subdivision (d)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

**§ 18105.5. Department Processing Requirements.**

Subdivisions (a) through (e)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

**§ 18105.6. Appeal of Decision.**

Subdivision (a)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

**§ 18105.8. Change in Owner.**

Subdivision (a)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

**§ 18105.9. Permit Review and Reissuance.**

Subdivision (d)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

**§ 18105.11. Voiding of a Standardized Permit.**

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

**Article 3.2. Reports of Facility Information**

**§ 18221.5.1. In-Vessel Digestion Facility Plan.**

This is adapted from an existing transfer station regulation [§ 18221.5] and is revised to address medium volume in-vessel digestion activities. The section is necessary to provide the enforcement agency with an opportunity to review information submitted by the operator to verify that the information is complete and correct prior to granting a registration permit to the operator. Subdivisions (a) through (o) are necessary to provide the enforcement agency with base-line information of how the facility will be operated. The information to be contained in the report is itemized and includes specifications on facility design, operation, and other details pertinent to the operation of medium volume in-vessel digestion facilities. This information is needed to assist the enforcement agency in making the determination whether the information is complete and correct, including that it demonstrates that the facility can operate consistent with state minimum standards.

**§ 18221.6.1. In-Vessel Digestion Report.**

This is adapted from an existing transfer station regulation [§ 18221.6] and is revised to address large volume in-vessel digestion activities. The section is necessary to provide the enforcement agency with an opportunity to review information submitted by the operator to assess the

potential for negative impacts to public health and safety and the environment, and to verify that the facility will be able to comply with the state minimum standards correct prior to granting a full solid waste facility permit to the operator. Subdivisions (a) through (q) are necessary to provide the enforcement agency sufficient information for determining if the facility will be able to comply with the state minimum standards and the terms and conditions set forth in the full solid waste facility permit. The information to be contained in the report is itemized and includes specification on facility design and operation, and other details pertinent to the operation of a large volume transfer/processing facility.

#### **§ 18227. Report of Composting Site Information.**

The revision is necessary to clarify that an operator that is required to obtain a Registration Permit for a Vegetative Food Material Composting Facility must also file a Report of Composting Site Information with the enforcement agency at the time of application.

##### Subdivision (d)

The revisions are necessary to clarify the types of proposed activities that may be used by the operator to control leachate, litter, odors, dust, rodents, and insects.

##### Subdivision (f)

The revision is necessary to ensure that the operator specifies feedstock pile sizes so that the enforcement agency can determine if the feedstock piles pose a threat to public health, and safety, and the environment.

##### Subdivision (n)

The revision is necessary to clarify that the enforcement agency may require the operator to revise the Odor Impact Minimization Plan and/or the Odor Best Management Practice Feasibility Report and associated plan if the operator proposes to accept new feedstock, such as food material or vegetative food material to protect public health, and safety, and the environment.

### **Article 4. Enforcement by EA and Review by Department**

#### **§ 18302. Written Complaints of Alleged Violations.**

##### Subdivision (a)

This revision is necessary to correct the misspelling of “complaint.”

##### Subdivision (b)

This revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

##### Subdivision (d)(1) through (34)

This subdivision is necessary to specify the procedures the enforcement agency shall implement for an odor complaint investigation prior to issuing a violation for failing to minimize odor-related to a compostable material handling operation or facility prior to determining whether or not to issue a violation for failing to minimize odors. The subdivision clarifies that the EA shall include any known fact relevant to the alleged violation or likely to be of assistance to the EA provided by local, state, and federal agencies having appropriate jurisdiction.

##### Subdivisions (e) and (f)

The renumbering of these subdivisions are necessary due to the addition of subdivision (d).

Subdivision (g)

The renumbering/revision of this subdivision is necessary due to the addition of subdivision (d) and to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

Subdivision (h)

The renumbering/revision of this subdivision is necessary due to the addition of subdivision (d) and to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

**Title 27: Appendix 1 Joint Permit Application Form**

**INSTRUCTIONS FOR COMPLETING THE APPLICATION FOR SOLID WASTE FACILITY PERMIT AND WASTE DISCHARGE REQUIREMENTS**

**Page 1**

**Header**

The deletion of the term “New” is necessary because the instructions for the application are no longer new instructions.

**Introduction**

The change of the “slash” symbol is to “And” is necessary to emphasize this existing, single application is used to separately apply for a Solid Waste Facility Permit and Waste Discharge Requirements.

**Paragraph 1**

**Sentence 1**

These revisions are necessary to clarify that the Department of Resources Recycling and Recovery (CalRecycle) replaced the California Integrated Waste Management Board; Enforcement Agencies is a more accurate reference than Local Enforcement Agency; and solid waste is regulated by CalRecycle and Enforcement Agencies or California Regional Water Quality Control Boards.

**Sentence 2**

These revisions are necessary to clarify that the application is to be used for new and changes to existing Solid Waste Facility Permits, Waste Discharge Requirements, and supporting documents, and Solid Waste Facility Permit Reviews.

**Sentence 4**

These revisions are necessary to clarify that applicants may check with the appropriate Enforcement Agency or Regional Water Quality Control Board for requirements and exemptions or the use of the Application/General Information Form for Waste Discharge Requirements and National Pollutant Discharge Elimination System permit (Form 200) by the Regional Water Quality Control Board.

**Sentence 5**

These revisions are necessary to clarify that the application and filing fees should be submitted to the appropriate Enforcement Agency and Regional Water Quality Control Board.

**Paragraph 2**

These revisions are grammar corrections and clarification that Department of Resources Recycling and Recovery (CalRecycle) replaced the California Integrated Waste Management Board.

**NOTE****Paragraph 1**

These revisions clarify that a different application form and submittal package is required for direct discharge and that the Regional Water Quality Control Board should be contacted if the operator is seeking to discharge to surface water under the NPDES permit.

**Paragraph 2**

The deletion of the first 2 sentences of the paragraph are necessary because the information is not pertinent for the application; sentences 2 and 3 are clarifications; and the remaining revisions specify the Regional Water Quality Control Board billing process for the application.

**Paragraph 3**

The deletion of this sentence is necessary because the terminology is not accurate. The Enforcement Agency stamps the application with "Date Received," and "Date Accepted" or "Date Rejected" pursuant to California Code of Regulations, Title 27, § 21650(a) and as represented on the Application for Solid Waste Facility Permit/Waste Discharge Requirements, Form E-1-77 (Application).

**Paragraph 4**

This paragraph is necessary to clarify that the application must be submitted in a form and format required by the Enforcement Agency and that the Enforcement Agency has discretion to establish terms and conditions of a proposed Solid Waste Facility Permit that the Enforcement Agency deems appropriate. For example, the Enforcement Agency may find that the maximum daily tonnage proposed on an Application exceeds the facility design capacity, and could therefore include a condition that establishes lower maximum daily tonnage limit consistent with the design capacity.

**Amount of Filing Fees**

This revision is necessary to clarify that the applicant should contact the Enforcement Agency for fee information.

**Amount of Filing Fees**

This revision is necessary to clarify that applicant should contact the Regional Water Quality Control Board for fee information.

**Page 2****For Official Use Only**

These revisions are necessary to clarify that the Department of Resources Recycling and Recovery (CalRecycle) replaced the California Integrated Waste Management Board and that the Local Enforcement Agency should be referred to as the Enforcement Agency (EA).

**SWIS Number**

These revisions are necessary to clarify that the Department of Resources Recycling and Recovery (CalRecycle) replaced the California Integrated Waste Management Board and that

the applicant must include the Waste Discharge Identification and global identification numbers for use by Regional Water Quality Control Board staff.

**Receipt Number**

These revisions are necessary to clarify that the Department of Resources Recycling and Recovery (CalRecycle) replaced the California Integrated Waste Management Board and that the Local Enforcement Agency should be referred to as the Enforcement Agency (EA).

**Date Received**

These revisions are necessary to clarify that the date received is when the Enforcement Agency or the Regional Water Quality Control Board receives the Application.

**Date Accepted**

These revisions are necessary to clarify that this date applies to the application, not application package, and the date does not apply to a permit review.

**Date Rejected**

These revisions are necessary for grammar corrections and clarification that this date applies to the application, not application package, and the date does not apply to a permit review.

**Date Acceptance of Incomplete Application**

These revisions are necessary to make grammar corrections.

**Due Date**

This date ~~is deleted because it is unnecessary~~does not apply to a permit review.

**Part 1. General Information**

**B. County:**

This revision is necessary because a facility could be located in more than one county.

**C. Type of Application:**

These revisions are necessary provide more clarity to assist the applicant in properly completing the Application.

**1. New SWFP and/or WDRs:**

This revision is necessary to clarify that this subdivision applies to a facility that does not have a current Solid Waste Facility Permit or Waste Discharge Requirements, regardless of whether the Solid Waste Facility Permit is a full permit or not.

**2. Change to SWFP and/or WDRs:**

This revision is necessary to clarify that the applicant is applying for a proposed change to the design or operation of the facility; it is the Enforcement Agency's discretion as to whether the proposed change results in a revision to the Solid Waste Facility Permit. The inclusion of Title 27, § 21620 and 21710 allows the applicant to refer to the specific CalRecycle and State Water Resources Control Board regulations regarding change in design or operation and Report of Waste Discharge Requirements.

**3. Waiver:**

The deletion of the phrase "The facility is exempted from a full SWFP pursuant to Title 27, § 21565 and/or" is necessary because the Application is not used for this purpose.

**5. Amendment of Application:**

The restructuring of this subdivision is necessary to clarify that this subdivision applies to an amendment, which includes any changes an applicant makes in the application after it has been submitted to the Enforcement Agency and before the Enforcement Agency has acted on the Application. The inclusion of Title 27, §§ 21610 and 21710 allows the applicant to refer to the specific CalRecycle and State Water Resources Control Board regulations regarding amendments to the application package and Report of Waste Discharge Requirements.

**6. RFI/ROWD/JTD Amendments:**

The restructuring of this subdivision is necessary to clarify that this subdivision applies to an amendment to the Report of Facility Information, Report of Waste Discharge, or Joint Technical Document, which includes a change that does not require a change to the Solid Waste Facility Permit or Waste Discharge Requirements.

**Part 2. Facility Description**

**A. Name of Facility:**

These revisions are necessary to clarify the name of the facility is the name that will be listed on the Solid Waste Facility Permit or the Waste Discharge Requirements.

**B. Location of Facility:**

**Paragraph 1.**

These revisions are necessary to clarify that if there is no facility address, a description of the location of the facility should be included and that the Assessor's Parcel Number(s) should also be included in this subdivision.

**Paragraph 2.**

The restructuring of this subdivision is necessary to provide more clarity on the location at the facility where the latitude and longitude should be determined.

**Page 3**

**Paragraph 3**

The deletion of the requirement to include a map or sketch is necessary because a map or sketch is required in other supporting permit documents, therefore it is not necessary to be submitted with the Application.

**C. Type of Activity:**

This revision is necessary to clarify that "Application" is the correct term when referencing the application package.

**1. Disposal:**

These revisions are necessary to make grammatical and clarification corrections. The engineered municipal solid waste conversion facility type has been added.

**2. Compostable Material Handling**

These revisions are necessary to clarify that composting activities are defined in regulation as "Compostable Material Handling" activities. The "a. Type" subdivision is deleted because the

type of compostable material (green waste, food waste, etc.) handled is required in Part 2.E.5. and, therefore, is not necessary in this subdivision.

**3. Transformation:**

These revisions are necessary to make grammatical and clarification corrections.

**4. Transfer/Processing:**

These revisions are necessary to clarify that transfer/processing is a type of activity and to restructure the paragraph for clarity. The “Informational Purposes Only” check box is removed because it is not necessary.

**5. Construction and Demolition/Inert Debris Processing:**

The addition of this subdivision is necessary to define the types of activities associated with a Construction and Demolition/Inert Debris Processing facility.

**6. In-vessel Digestion:**

This subdivision is added to define the types of activities associated with In-vessel Digestion.

**7. Other:**

This revision is necessary to renumber based on the addition of new types of activities and to clarify that any solid waste activity listed in this subdivision must be authorized by law.

**D. Identification of Facility in CIWMP [Conformance Finding Information]:**

The revision to the title of this subdivision is necessary to clarify that the applicant’s solid waste facility may be identified in the Conformance Finding Information specified in Title 27, § 21570(f)(5). Revisions to subdivision 1) are sentence restructuring for clarity. Subdivision 2) is removed because it is not necessary.

**E. Type Of Permitted Wastes To Be Received:**

This revision is necessary to clarify that “Application” is the correct term when referencing the application package.

**1. Agricultural:**

These revisions are necessary to clarify the definition of agricultural waste.

**2. Asbestos:**

The removal of the first sentence is necessary to defer to the Department of Toxic Substances classification of asbestos. The other revisions are necessary to clarify that the Department of Toxic Substances Control, not the Department of Health Services, classify friable wastes that contain one percent or more of asbestos by weight as hazardous wastes and require that the applicant check the appropriate box to indicate if the asbestos is friable or non-friable.

**3. Ash:**

These revisions are necessary to clarify that ash includes, but is not limited to, residue from the incineration of municipal waste, medical waste, woodwaste, sludge, and agricultural waste. Replacing “infectious” waste is with “medical” waste is necessary because medical waste is the more appropriate term.

**4. Treated Auto Shredder Waste:**

The revision in the title is necessary to clarify that “Treated Auto Shredder Waste” is the correct term to describe this material. The replacement of “sheet metal” is with “similar items” is

necessary for accuracy. The removal of the last sentence is necessary because it is outdated and unnecessary.

**5. Compostable Material:**

This revision is necessary to clarify that the types of compostable material are to be included in this subdivision rather than in Part 2.C.2.

**6. Construction/Demolition Waste:**

This revision is necessary to make a grammatical correction.

**Page 4**

**7. Contaminated Soil:**

This revision is necessary to clarify the contaminated soil is a soil that the Regional Water Quality Control Board or the Local Oversight Agency has classified as a designated waste.

**8. Dead Animals:**

This revision is necessary to make a grammatical correction.

**11. Liquids:**

This revision is necessary to make a spelling correction.

**12. Municipal Solid Waste (MSW):**

The revisions are necessary to clarify that solid waste derived from residential and commercial sources that may be mixed with other solid waste is considered "municipal solid waste."

**14. Waste Tires:**

These revisions are necessary to be consistent with the definition specified in Public Resources Code § 42807.

**Part 3. Facility Information**

Removal of existing subdivision A. is necessary because applicable information is relocated to new subdivision A.1.a.

**A. Facility Information**

**1. Information Applicable to All Existing Facilities:**

The revisions are necessary to clarify that this subdivision of the Application must be filled out by every applicant regardless of the type of facility. Information in this subdivision is necessary to establish the status quo of existing facility conditions, whereas information provided in Part 3.A.2. below will identify proposed changes to status quo conditions.

**a. Maximum Daily Tonnage or Cubic Yards:**

**Sentence 1**

The revisions are necessary to change the term "Peak" Daily Tonnage or Cubic Yards and its accompanying explanation, which stakeholders had found to be unclear, to "Maximum" Daily Tonnage or Cubic Yards, and to clarify in the explanation that the maximum daily tonnage is the maximum amount of solid waste and other material the applicant is authorized by the Enforcement Agency to receive through the gate to store, process, transfer, beneficially reuse, recycle or dispose per day as part of normal, day-to-day operations and that the applicant

should include information on all other material authorized by the Enforcement Agency to receive in the Report of Facility Information.

**Sentence 2**

The revisions are necessary to clarify that maximum daily tonnage shall be expressed in tons or cubic yards with a conversion factor if tonnage is not available.

**Sentence 3**

The removal of the sentence referring to “permitted maximum tonnage” is necessary to avoid confusion of terms.

**Sentence 4**

The revisions are necessary to clarify that the maximum daily tonnage must be consistent with the approved Solid Waste Facility Permit and Report of Facility Information.

**Sentence 5**

Reference to the maximum daily tonnage or cubic yards being consistent with the California Environmental Quality Act (CEQA) is removed because it is not necessary for it to be consistent at the time of application; it needs to be consistent prior to the Enforcement Agency issuing a permit.

**Sentence 6**

The revisions are necessary to clarify that applicants for new Solid Waste Facility Permits and/or Waste Discharge Requirements should enter zeros in all items of this subdivision and the two amounts in (1) Disposal/Transfer and (2) Other must equal the maximum daily tonnage.

**Page 5**

**1. Disposal/Transfer:**

This revision is necessary to clarify that the applicant must include in this subdivision the amount of solid waste that comes through the gate and is disposed of on-site or transferred off-site as waste.

**2. Other:**

The revisions are necessary to clarify that the applicant must include in this subdivision the amount of all other material received at the site, including, but not limited to, material that is recycled, beneficially reused (such as ADC, road building or other on-site projects), stored or processed. Deletion of the last sentence is necessary because the maximum daily tonnage is requested sentence 6 of the subdivision “a: Maximum Daily Tonnage or Cubic Yards:”

**b. As-Designed Daily Tonnage or Cubic Yards:**

This subdivision is restructured for clarity, and the revisions are necessary to be consistent with proposed changes in other subdivisions, such as the amount of solid waste received and reporting the amount in tonnage or cubic yards.

**c. Facility Size:**

The revisions are necessary for clarity and consistency and to specify that solid waste facility activities in the permit need to be authorized by the Enforcement Agency.

**d. Maximum Traffic Volume Per Day (vpd):**

The revisions are necessary to change the term “Peak” Traffic Volume Per Day to “Maximum” Traffic Volume Per Day to be consistent with Part 3.A.1.a, and to clarify that maximum number of vehicles is the number of vehicles authorized by the Enforcement Agency, including vehicles transporting solid waste material intended for beneficial use and the number must be consistent with the approved Report of Facility Information. Reference to the maximum traffic volume per day being consistent with the CEQA is removed because it is not necessary for it to be consistent at the time of application; it needs to be consistent prior to the Enforcement Agency issuing a permit.

**e. Days and Hours of Operation:**

The revisions are necessary to clarify that the days and hours of operation and the hours of waste receipt are authorized by the Enforcement Agency and the information must be consistent with the approved Report of Facility Information. Reference to the days and hours of operation being consistent with the CEQA is removed because it is not necessary for it to be consistent at the time of application; it needs to be consistent prior to the Enforcement Agency issuing a permit.

**2. Proposed Change(s) or Information Applicable to New SWFP and/or WDRs:**

This subsection is necessary to identify an applicant’s requested changes to status quo conditions (provided in Part 3.A.1.) at a facility, and to clarify that the Enforcement Agency and RWQCB will establish permit terms and conditions for those requests that are supported by documents submitted by the applicant.

**3. Additional Information Required For Compostable Materials Handling Facilities Only:**

These revisions are necessary to clarify that compost facilities are referred to as “Compostable Material Handling” facilities and the application is referred to as the “Application.”

**a. Total Site Capacity:**

These revisions are necessary to revise the title and explanation to clarify that total capacity should be stated in tons or cubic yards of all material that is received, processed, and stored on-site at any one time.

**4. Additional Information Required For Landfills Only:**

These revisions are necessary to clarify that this portion of the Application must be filled out by the applicant if a landfill is part of the Application and that all subdivisions of the Application must be filled out completely.

**Page 6**

**a. Average Daily Tonnage (TPD):**

The revisions are necessary to clarify that average daily tonnage is the estimated average waste tonnage expected to be placed in a waste management unit for each operating day; non-operating days should not be used in calculating the average daily tonnage; and the average daily tonnage can be equal to but may not exceed the maximum daily tonnage.

**c. Site Capacity Proposed (Airspace) (cu yds):**

The revision is necessary to clarify that “Application” is the correct term when referencing the application package.

**e. Site Capacity Remaining (Airspace) (cu yds):**

The revision is necessary to clarify that “Date of Capacity Information” is the correct term when referencing this subdivision of the application.

**f. Date Of Capacity Information (date):**

The revision is necessary to clarify that “Application” is the correct term when referencing the application package.

**i. Disposal Footprint (acres):**

The revision is necessary to make a punctuation correction.

**k. Provide one of the following:**

The revision is necessary to clarify that the applicant must provide one of the following: In-place Waste Density (lbs of waste per cubic yard of waste) or Waste-to-Cover Ratio (estimated) (volume:volume).

**(ii) Waste-to-Cover Ratio (estimated) (volume:volume).**

The revisions are necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

**2. Airspace Utilization Factor (tons of waste per cubic yard of landfill airspace).**

The revisions are necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

**Part 4. SOURCE OF WATER SUPPLY**

Page 7

**D. Other:**

This new subdivision is necessary to clarify that the applicant must identify water sources at the facility other than municipal or utility service, individual wells, and surface supply.

**Part 5. COMPLIANCE WITH CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)**

**A. CHECK BOX(ES) IF ENVIRONMENTAL DOCUMENT WAS OR WILL BE PREPARED**

The revisions are necessary to make grammatical corrections.

**1. If an environmental document was prepared:**

The revisions are necessary to clarify that the requirements of subdivision A apply only if an environmental document was prepared.

**2. If an environmental document will be prepared, ...**

This revision is necessary to enable government agencies and other interested parties to contact the lead agency regarding environmental documents.

**B.**

The revisions are necessary to make grammatical corrections.

**Part 6. LIST OF ATTACHMENTS**

The addition is necessary to clarify that all attachments are incorporated in to the Application.

**A.**

The revision is necessary to delete unnecessary text.

**B.**

The revisions are necessary to clarify that this subdivision must be completed only by applicants for disposal facilities.

**Operating Liability Financial Mechanism:**

The revisions are necessary to clarify that the date the demonstration was last modified or renewed must be within the preceding twelve-month (annual renewal) period; the Department of Resources Recycling and Recovery (CalRecycle) replaced the California Integrated Waste Management Board; and the “effective date” identified on the Certificate of Insurance must be within the preceding twelve-month (annual renewal) period.

**Financial Responsibility Documentation:**

The revisions are necessary to clarify that the financial mechanism is a document and that date of the stated value must be within the preceding twelve-month (annual renewal) period.

**Page 8**

**Closure/Post Closure Maintenance Plan:**

The revisions are necessary to clarify that the closure and postclosure maintenance plans are those plans required by Title 27, §§ 21780 and 21865 as applicable.

**Known or Reasonably Foreseeable Corrective Action Cost Estimates:**

The water release corrective action cost estimate and the non-water release corrective action cost estimate are necessary to comply with requirements in Title 27, §§ 22100 through 22103.

**Landfill Capacity Survey Results:**

The revisions are necessary to ensure that terms are used consistently throughout the regulations.

**For the purposes of this section the following definitions apply:**

The renumbering is necessary to conform to conventional numbering standards (e.g., A.1.).

**C.**

The revisions are necessary to clarify that additional documents may be required by the Enforcement Agency or the Regional Water Quality Control Board and the applicant should identify and list any other necessary documents that are not specified in the above list but that are required by the Enforcement Agency or the Regional Water Quality Control Board under applicable law. Grammatical corrections clarify that necessary documents could include a lease or other agreement documenting the operator's interest in and right to use the site as a solid waste facility or a contract between the permitted operator and contract operator.

**Page 9**

**Part 7. OWNER INFORMATION:**

**Type of Business:**

The revisions are necessary to clarify that the owner of the facility that is the subject of the Application must specify if it is a sole proprietorship, partnership, corporation, or public agency.

**Owner of Land:**

The revision is necessary to clarify that the owner of land means the person(s) that owns the land on which the facility is located.

**Telephone #, Contact Person, Fax #, and E-mail Address:**

The revision is necessary to clarify that “#” means number.

**Address Where Legal Notice May Be Served:**

The revisions are necessary to clarify that the applicant must provide the name and address of the person authorized to accept service for each owner of the facility.

**Part 8. OPERATOR INFORMATION:**

The revisions are necessary to clarify that the operator filing the Application must specify if it is a sole proprietorship, partnership, corporation, or public agency.

**Type of Business:**

The revisions are necessary to specify information requested in this part pertains to the owner of the facility subject to the Application, and to categorize all types of publically-operated facilities as opposed to just government-operated facilities.

**Facility Operator:**

The revisions are necessary to clarify that the term “The person” could be an individual(s), partnership, corporation, or public agency.

**Address, City, State, Zip:**

The revision is necessary to clarify that the facility operator is a single entity.

**SSN or Tax ID #:**

The revision is necessary to clarify that the operator is a single entity.

**Telephone #, Contact Person, Fax #, and E-mail Address:**

The revision is necessary to clarify that “#” means number.

**Address Where Legal Notice May Be Served:**

The revisions are necessary to clarify that the applicant must provide the name and address of the person authorized to accept service for the operator of the facility.

**Part 9. SIGNATURE BLOCK:**

**Signature (landowner or agent):**

The revisions are necessary to clarify that the signature of the landowner is a person(s) authorized to sign on behalf of the owner.

**Signature (lessee):**

The new definition is necessary to clarify that the signature of lessee is a person(s) authorized to sign on behalf of the person leasing the land, if applicable.

**Signature (facility operator):**

The revisions are necessary to clarify that the signature of the facility operator is a person(s) authorized to sign on behalf of the operator.

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**APPLICATION FOR SOLID WASTE FACILITY PERMIT/WASTE DISCHARGE REQUIREMENTS**

**Page 1**

**Header**

**Line 2**

The revision is necessary to clarify that the Department of Resources Recycling and Recovery replaced the California Integrated Waste Management Board.

**Line 5**

The revisions are necessary to clarify that the Department of Resources Recycling and Recovery (CalRecycle) replaced the California Integrated Waste Management Board and the 8/2004 application form revision date will be replaced by a new revision date when the proposed regulations are approved by the Office of Administrative Law.

**For Official Use Only**

The revision is necessary to clarify that the applicant must include the Waste Discharge Identification and global identification numbers for use by Regional Water Quality Control Board staff.

**Part 1. GENERAL INFORMATION**

**C. Type of Application (Check one box only)**

**2. Change to SWFP and/or WDRs:**

This revision is necessary to clarify that any type of change to the design or operation of the facility is a change to the Solid Waste Facility Permit and could be a "Revision" to the permit, a "Modification" to the permit, or "Other" change to the permit as authorized by law.

**3 (existing). Exemption and/or Waiver (deleted)**

The deletion of "Exemption and/or Waiver" is necessary because the Application is not used for this purpose.

**3 (new). Permit Review, 4. Amendment of Application, 5. RFI/ROWD/JTD Amendments**

The renumbering of these 3 subdivisions is necessary due to the deletion of the Exemption and/or Waiver subdivision above.

**Part 2. FACILITY DESCRIPTION**

**C. Type of Activity (Check applicable boxes)**

**2. Compostable Material Handling**

This revision is necessary to clarify that composting activities are referred to as “Compostable Material Handling” activities.

**4. Transfer/Processing:**

These revisions are necessary to clarify that transfer/processing is a type of activity. The “Informational Purposes Only” check box is removed because it is not necessary.

**5. Construction and Demolition/Inert Debris Processing:**

The addition of this subdivision is necessary to define the types of activities associated with a Construction and Demolition/Inert Debris Processing facility.

**6. In-vessel Digestion:**

The addition of this subdivision is necessary to define the types of activities associated with In-vessel Digestion.

**7. Other:**

This revision is necessary to clarify that any solid waste activity listed in this subdivision must be authorized by law.

**D. Identification of Facility in CIWMP [Conformance Finding Information]:**

The revision to the title of this subdivision is necessary to clarify that the applicant’s solid waste facility may be identified in the Conformance Finding Information specified in California Code of Regulations, Title 27, § 21570(f)(5).

2. Check box “FACILITY IS NOT REQUIRED TO BE IDENTIFIED IN SITING ELEMENT OR NONDISPOSAL FACILITY ELEMENT” is deleted because it is not necessary.

**E. Type Of Permitted Wastes To Be Received:**

**12. Municipal Solid Waste (MSW):**

The revisions are necessary to clarify that solid waste derived from residential and commercial sources that may be mixed with other solid waste is commonly referred to as “municipal solid waste.”

**14. Waste Tires:**

This revision is necessary to be consistent with the definition specified in Public Resources Code § 42807.

**Part 3. Facility Information**

Subdivisions “A. Proposed Change” and “B. Facility Information” are deleted and restructured to:

A. Facility Information

1. Information Applicable to All Existing Facilities

## 2. Proposed Change(s) or Information Applicable to New SWFP and/or WDRs

These revisions are necessary to clearly indicate proposed changes by physically positioning, in side-by-side format, information about existing terms and conditions at a Solid Waste Facility (Part 3.A.1.) next to changes the applicant is proposing (Part 3.A.2.).

### **3. Additional Info. Required For Compostable Materials Handling Facilities Only:**

The revision is necessary to clarify that compost facilities are referred to as “Compostable Material Handling” facilities.

#### **a. Total Site Capacity:**

These revisions are necessary to clarify that the information requested of the applicant relates to the total capacity of the site rather than simply the amount of material stored on-site. The total site capacity includes all material that is received, processed, and stored on-site at any one time.

### **4. Additional Information Required For Landfills Only:**

The renumbering of this subdivision is necessary due to restructuring of changes in the previous subdivisions of Part 3. Facility Information.

## Page 3

## **Part 4. SOURCE OF WATER SUPPLY**

### **D. Other:**

This new subdivision is necessary to clarify that the applicant must identify water sources at the facility other than municipal or utility service, individual wells, and surface supply.

## **Part 5. COMPLIANCE WITH CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)**

### **A. CHECK BOX(ES) IF ENVIRONMENTAL DOCUMENT WAS OR WILL BE PREPARED**

The deletion of the reference to the State Clearinghouse Number (SCH#) in this subdivision is necessary since the SCH# needs to be provided only if an environmental document was prepared, not if an environmental document will be prepared.

#### **1. Environmental Document Was Prepared:**

This subdivision is necessary to clarify that the requirements of subdivision A.1. apply only if an environmental document was prepared.

#### **2. Environmental Document Will Be Prepared (Enter Lead Agency if Known):**

This subdivision is necessary to clarify that the requirements of subdivision A.2. apply only if an environmental document will be prepared and to enable government agencies and other interested parties to contact the lead agency regarding the environmental documents.

## **Part 6. LIST OF ATTACHMENTS**

### **A. REQUIRED WITH ALL APPLICATION SUBMITTALS**

#### **Local Use/Planning Permits**

The deletion of “Local Use/Planning Permits” is necessary because it is not necessary for the applicant to include this type of document(s) with the Application.

**Mitigation Monitoring & Reporting Program**

The deletion of "Implementation Schedules" & addition of "Reporting Program" is necessary to adjust to correct terminology "Mitigation Monitoring & Reporting Program," as specified in California Code of Regulations, Title 14, § 15097.

**List of Public Hearings and Other Meetings Open to the Public**

The addition of this list is necessary to include information required by Public Resources Code, § 44004(h)(1)(A).

**B. Additional Required Documents For Disposal Facilities Only**

The reference to "Disposal Facilities" instead of "Landfills" is necessary to conform to common terminology used in California Code of Regulations, Title 27, Division 2.

**Known or Reasonably Foreseeable Corrective Action Cost Estimates**

The addition of this document is necessary to include information required by California Code of Regulations, Title 27, § 22101.

**C. IF APPLICABLE:**

**Contract Agreements**

The deletion of "Contract Agreements" is necessary because if the applicant is not required to include these types of documents with the Application.

**Dept. Of Toxic Substances Control Or Certified Unified Program Agency Permit**

The revisions are necessary to clarify that the applicant may provide a copy of a permit, if applicable, from the Department of Toxic Substances Control or a Certified Unified Program Agency.

**Page 5**

**Part 9. SIGNATURE BLOCK:**

**Lessee:**

The addition of this subdivision is necessary to clarify that a lessee is a person(s) authorized to sign on behalf of the person leasing the land, if applicable, and the lessee must provide a signature, printed name, title, and date on the Application.

# Standardized Regulatory Impact Assessment

## CalRecycle – Compostable Materials and Transfer/Processing Regulations

### POSTSCRIPT

The proceeding pages contain the results of a Standardized Regulatory Impact Assessment performed, pursuant to Government Code section 11346.3(c)(1), on a September 2014 draft of the proposed regulations made available for an initial public comment between October 10 and December 5, 2014. During subsequent rulemaking, CalRecycle made changes to the proposed regulations associated with the allowable percentage of physical contamination in compost and compostable material. These changes reduced the specific costs of compliance with the physical contamination standard and the overall costs of the final proposed regulation.

The following tables represent updated estimated costs of the final proposed regulation.

**Summary of costs to government agencies, and private and public operations and facilities associated with the Compostable Materials Handling regulations**

	Estimated Cost (based on existing operations and facilities)
Private Operations and Facilities	\$770,345 - \$45,092,544/yr.
Public Operations and Facilities, and Government Agencies	\$220,834 - \$3,323,547/yr.
Total	<b>\$991,179 - \$48,416,091/yr.</b>

**Summary of costs to government agencies, and private and public operations and facilities associated with the In-vessel Digestion regulations**

	Estimated Cost (based on projections)
Private Operations and Facilities	\$309,625 - \$2,915,075/yr.
Public Operations and Facilities, and Government Agencies	\$320,166 - \$3,215,188/yr.
Total	<b>\$629,791 - \$6,130,263/yr.</b>

**Total Costs**

	Estimated Total Costs
Private Costs (Compostable Materials and In-vessel Digestion)	\$1,079,970 - \$48,007,619/yr.
Public Costs (Compostable Materials and In-vessel Digestion)	\$541,000 - \$6,538,735/yr.
Total	<b>\$1,620,970 - \$54,454,354/yr.</b>

# Standardized Regulatory Impact Assessment

## CalRecycle – Compostable Materials and Transfer/Processing Regulations

### I. STATEMENT OF PURPOSE

#### A. Statement of the Need for the Proposed Major Regulation

The central purpose of the proposed regulations is to protect public health, safety, and the environment by more effectively regulating solid waste facilities that handle compostable materials. The proposed regulations modify the existing Compostable Material Handling Operations and Facilities Regulatory Requirements by: clarifying several feedstock definitions - and the types of operations and facilities that can accept these materials; revising the maximum concentrations of metals allowed in compost to reflect changes adopted by US EPA; providing Enforcement Agencies with discretion to authorize temporary storage of additional material; revising Enforcement Agency inspection frequency language to ensure consistency throughout Title 14; providing operators and Enforcement Agencies with a mechanism to address chronic odor complaints and identify sources of odor; establishing criteria for safe land application of compostable material; requiring compost products to meet a 0.1% physical contaminant limit by weight; and clarifying small-scale composting requirements at sites, such as community gardens and schools.

The proposed regulations provide a standardized regulatory framework for in-vessel digestion activities. Currently, in-vessel digestion activities are subject to either existing Transfer/Processing Operations and Facilities Regulatory Requirements or Compostable Material Handling Operations and Facilities Regulatory Requirements, depending on the nature of the feedstock and how it is handled. The proposed regulations combine transfer/processing and compostable material handling requirements into a stand-alone set of in-vessel digestion regulations, which will have marginal impacts on in-vessel digestion activities compared to existing regulations.

The proposed regulations also clarify permitted maximum tonnage on the solid waste facility permit application.

The proposed regulations provide a wide range of benefits to public health, safety, and the environment. Benefits include: requiring subject materials to meet a 0.1% physical contaminant limit, which will reduce litter and minimize the amount of plastic entering surface water and the ocean while creating new jobs and increasing the market value of compost and mulch; establishing criteria for safe land application of compostable material, which will also reduce litter and minimize the amount of plastic entering surface water and the ocean and improve food safety and animal health by reducing toxic metals, disease-causing organisms, physical contaminants, and invasive/noxious species in compostable material; minimizing odors at compostable material handling and in-vessel digestion facilities; decreasing greenhouse gases, air pollution, and long-distance transportation of organic material by facilitating small-scale composting and in-vessel digestion; increasing the production of biofuels/bioenergy; and providing clarity to the regulated community and regulators.

Finally, the proposed regulations will ensure safe operations and facilities to handle organic material diverted as the result of California's goal to source-reduce, recycle, or compost 75% of the solid waste generated in the State by 2020.

# Standardized Regulatory Impact Assessment

## CalRecycle – Compostable Materials and Transfer/Processing Regulations

## II. METHODOLOGY

### A. Economic Impact Method and Approach

The Department used a Regional Economic Models, Inc. (REMI) model to estimate the economic impacts of the proposed regulations. The REMI model is an analytical tool which can model a regional economy and analyze year-by-year impacts and total impacts on a macro scale. The current regulations (baseline) were compared to the proposed regulations, and economic impacts on businesses complying with the proposed regulations were estimated using the REMI model.

The REMI PI+ model employed for this analysis was “Software Build 1.5.2” (Build 3283, 6/4/2013). It is a one-region, 160-sector model, which was modified using the California-specific data for population, demographics and employment (as specified by the Department of Finance).

### B. Specific Categories of Individuals and Business Enterprises Affected

An estimated 363 businesses would be impacted:

- 94 - Agricultural Material Compost Operations
  - 1 - Biosolids Composting Operation at Publicly Owned Treatment Works
- 18 - Research Composting Operations
- 59 - Green Material Composting Operations
- 26 - Green Material Composting Facilities
- 30 - Composting Facilities
- 55 - Chipping and Grinding Operations
- 20 - Chipping and Grinding Facilities
- 30 - In-vessel Digestion Operations
- 30 - In-vessel Digestion Facilities

The North American Industry Classifications System (NAICS) sectors that may be impacted include:

Sector	NAICS	List
Agriculture, Forestry, Fishing and Hunting	11	111; 112; 113; 114; 115
Utilities	22	22132
Construction	23	23661; 23621; 23731
Manufacturing	31-33	311; 3121; 32111; 32121; 32211; 32212; 32213; 32221; 32222; 32223; 325314
Professional, Scientific, and Technical Services	54	54162
Administrative and Support and Waste Management and Remediation Services	56	562; 562111; 562920

### C. Inputs into the Assessment of the Economic Impact

Appendices B-1 through B-4 present the calculations and assumptions to estimate the costs of the proposed regulations.

# Standardized Regulatory Impact Assessment

## CalRecycle – Compostable Materials and Transfer/Processing Regulations

Appendix B-1 presents the calculations and assumptions to estimate the cost to privately-owned or operated Compostable Material Handling Operations and Facilities. Appendix B-3 presents the calculations and assumptions to estimate the costs to publicly owned and operated Compostable Material Handling Operations and Facilities, and to public agencies associated with the revised Compostable Material Handling Operations and Facilities Regulatory Requirements. These proposed regulations are revisions to existing Compostable Material Handling Operations and Facilities Regulatory Requirements (California Code of Regulations, Title 14, Division 7, Chapter 3.1). The Department's estimate of the costs to operations and facilities subject to the compostable material handling regulations is based on actual numbers of existing operations and facilities and knowledge of the throughput tonnage.

Appendix B-2 presents the calculations and assumptions to estimate the cost to privately owned or operated In-vessel Digestion Operations and Facilities. Appendix B-4 presents the calculations and assumptions to estimate the costs to publicly owned and operated In-vessel Digestion Operations and Facilities, and to public agencies associated with the proposed In-vessel Digestion Operations and Facilities Regulatory Requirements. Currently, these types of solid waste operations and facilities are subject to either the Transfer/Processing Operations and Facilities Regulatory Requirements (California Code of Regulations, Title 14, Division 7, Chapter 3, Articles 6.0 – 6.35) or the Compostable Material Handling Operations and Facilities Regulatory Requirements (California Code of Regulations, Title 14, Division 7, Chapter 3.1). These proposed in-vessel digestion regulations provide a single, stand-alone set of regulations for this type of solid waste activity. The Department's estimate of the costs to operations and facilities subject to the in-vessel digestion regulations includes assumptions about the number of projected operations and facilities, and accounts for differential impacts related to whether the operations and facilities would have been regulated under the Compostable Materials regulations or the Transfer/Processing regulations.

Four scenarios were analyzed (Low Cost – Compostable Materials; Low Cost – In-Vessel Digestion; High Cost – Compostable Materials; High Cost – In-Vessel Digestion) under the assumption that the first year of implementation is 2015. If implementation is delayed a year, or two, then the costs will be similarly delayed. The regulations contain provisions that allow pre-existing operations and facilities to operate in accordance with an existing regulatory authorization for up to 2 years before the operation or facility would be subject to the In-vessel Digestion portion of these regulations. Therefore, the Department estimates the regulations as a whole will be fully implemented at the end of year two (from the operative date of regulations). For the purposes of this assessment, the Department is identifying costs for 2015 (first year of implementation) and 2018 (12 months after full implementation). Forecasts show increasing costs for the subsequent years, at a rate of increase of 1.0% to 1.4% annually, depending on the scenario. This increase is primarily due to the annual increase due to population, and in assumed increases in collection efficiencies. The full presentations for all years assessed, for all scenarios, are available upon request. It is important to note that these changes are from a baseline of growth in the industry for each year, as specified in the assumptions. This regulation does not create a new industry, and hence the jobs that will occur within this new and expanding industry sector are not counted in this assessment. Only the ancillary jobs, related to regulatory compliance and enforcement, are counted in this assessment.

The complete assessment of all economic impacts, including costs by sector, and changes in employment, involved a two-step assessment. The first step was to analyze the direct costs of all compliance and regulatory activities that result from the regulation. Once these were obtained, the second step was to insert the resulting annualized cost estimates for relevant

# Standardized Regulatory Impact Assessment

## CalRecycle – Compostable Materials and Transfer/Processing Regulations

employment sectors into the REMI software. This software allows estimation of indirect and induced effects of the proposed regulation, in each of the four scenarios. The results are displayed in separate tables, as the variables are quite different for each type of assessment.

Four key cost components that comprise the annual total cost were selected:

General Cost includes all costs not specifically detailed in the other three categories. This is principally labor necessary to complete the sampling, removal of physical contaminants and recordkeeping requirements as specified in the regulation, under the specific assumptions of the individual scenario.

Machinery/Equipment Cost includes costs of purchased equipment only. The General Cost category does include some embedded machinery costs, where it was expected that work would be hired out to contractors, and the machinery cost was considered as part of the total cost of the contract. The direct expenditure for machinery is less than 10% of this listed amount, and was inserted into the REMI model in the year that expenditure was expected to occur (in the high cost scenarios).

Laboratory Cost includes only the cost of the laboratory in analyzing the samples. Collection of samples, and oversight of the sampling process, is contained in General Cost.

Regulatory Agency Cost includes the cost of oversight and enforcement of the regulation, for individual State agencies. The detailed spreadsheets contain cost estimates for each separate state agency, including Regional Water Quality Board costs.

The direct costs were separated into these categories to facilitate the modeling within REMI, which determines the related indirect costs. Within that model, different economic multipliers are contained that are specific to these selected categories. For example, the indirect jobs related to manufacturing of special equipment are attributed in much higher portion to states that have stronger manufacturing sectors, and these new jobs are assigned outside the State, and included in the job total in the first line of each scenario in Table 3. Estimated changes in California-specific jobs are shown separately.

# Standardized Regulatory Impact Assessment

## CalRecycle – Compostable Materials and Transfer/Processing Regulations

Table 1: Estimated Direct Cost of Compostable Materials and In-vessel Digestion Regulations, Four Scenarios: Low and High Cost Range

LOW COST SCENARIO		Direct Costs (per year) – Compostable Materials (Public & Private)	
Year		2015	2018
General Cost		\$707,505	\$716,121
Machinery/Equipment Cost		\$0	\$0
Laboratory Cost		\$90,082	\$95,738
Regulatory Agency Cost		\$0	\$34,548
Total Cost		\$797,587	\$846,407

  

LOW COST SCENARIO		Direct Costs (per year) – In-Vessel Digestion (Public & Private)	
Year		2015	2018
General Cost		\$4,637	\$172,209
Machinery/Equipment Cost		\$2,743	\$557,235
Laboratory Cost		\$0	\$1,967
Regulatory Agency Cost		\$0	\$43,152
Total Cost		\$7,380	\$774,563

  

HIGH COST SCENARIO		Direct Costs (per year) – Compostable Materials (Public & Private)	
Year		2015	2018
General Cost		\$33,480,169	\$35,494,875
Machinery/Equipment Cost		\$16,193,010	\$17,184,152
Laboratory Cost		\$1,089,174	\$1,155,840
Regulatory Agency Cost		\$0	\$34,548
Total Cost		\$50,762,353	\$53,869,415

  

HIGH COST SCENARIO		Direct Costs (per year) – In-Vessel Digestion (Public & Private)	
Year		2015	2018
General Cost		\$5,253	\$5,829,747
Machinery/Equipment Cost		\$3,393	\$3,802,468
Laboratory Cost		\$0	\$3,980
Regulatory Agency Cost		\$0	\$43,152
Total Cost		\$8,646	\$9,679,347

The range between the Low Cost and High Cost is largely due to the estimated costs associated with the proposed 0.1% physical contaminants limit. Based on stakeholder input, the Department estimates a sizable range in the cost incurred to comply with this proposed standard because some operations and facilities may already be meeting the standard and will incur zero cost, whereas others, depending on the percent contamination in feedstock, will incur higher costs associated with additional labor, equipment operation and maintenance, education, etc. That is, if incoming feedstock is low in contaminants, costs can be avoided or significantly reduced. The Department estimates actual costs to will be somewhere in between the Low Cost and High cost scenarios. The median cost would be around \$31 Million per year.

The direct costs in Table 1 include summed costs for a wide range of composter types. Some of these facilities will incur costs that can be allocated to specific categories, such as purchase of new equipment and purchase of laboratory services. For other facility types, there may be some additional equipment used, but these expenditures are indirect, inasmuch as the

# Standardized Regulatory Impact Assessment

## CalRecycle – Compostable Materials and Transfer/Processing Regulations

equipment will be included under a contract for services. Equipment not specifically identified, which may be used at facilities as a result of compliance with the regulation, is included under the “General Cost” category.

In the direct impact analysis, the costs were all based on 2012 expenditures, but the REMI model that was used for this analysis is based on 2005 dollar values. Thus the output values from the direct analysis are converted to the REMI model values. (The jobs estimate is not modified.) All of the variables in the direct cost analysis need to be converted to the units used by the REMI model, either millions or billions for the values, and all jobs estimates in thousands. These conversions were also made. The six specific REMI model policy variables selected for the model are shown in the Table 2 below.

Table 2: REMI Model Policy Variable Selected

	<b>HIGH SCENARIOS</b>		<b>AS TRANS/PROC/OP</b>		
2005 \$m	B 1-4, AS TRANS/PROC/OP	Production Cost	Waste management & remediation services	COSPOL2	x7930
2005 \$m	MACHINERY/EQPT.	Exogenous Final Demand	Waste management & remediation services	DEMPOL	X6530
2005 \$m	MANUFACTURING PURCHASE	Capital Cost	Waste management remediation services	COSCAP2	x10130
2005 \$m	LAB COSTS	Exogenous Final Demand	Management, scientific, & technical consulting svcs.	DEMPOL	x6520
2005 \$m	REGULATORY COST	State Govt. Spending	Total	FDPVST	63

# Standardized Regulatory Impact Assessment

## CalRecycle – Compostable Materials and Transfer/Processing Regulations

### D. Outputs from the Assessment of the Economic Impact

The forecasted costs of the regulation are displayed in Table 3. The forecasted costs for the four categories were input for each of the four scenarios that resulted in four separate REMI outputs. These results are shown for the two selected years.

Table 3: Estimated Cost of Compostable Materials and In-vessel Digestion Regulations, Four Scenarios: Low and High Cost Range

LOW COST SCENARIO		Costs (per year) – Compostable Materials		
Year	Measure	2015	2018	
Total Employment	Jobs	0	-2	
Laboratory Services (Mgmt. Sci & Tech Consult.)	Jobs	1	1	
Waste Mgmt. & Remediation Svcs.	Jobs	0	2	
Gross Domestic Product	\$ Mill.	\$0.0	\$0.0	
Output	\$ Mill.	\$0.0	\$0.0	
Value Added	\$ Mill.	\$0.0	\$0.0	
Relative Composite Input Costs	Proportion	0.0%	0.0%	
Relative Delivered Price	Proportion	0.0%	0.0%	
Relative Cost of Production	Proportion	0.0%	0.0%	

LOW COST SCENARIO		Costs (per year) – In-Vessel Digestion		
Year	Measure	2015	2018	
Total Employment	Jobs	0	-2	
Laboratory Services (Mgmt. Sci & Tech Consult.)	Jobs	1	1	
Waste Mgmt. & Remediation Svcs.	Jobs	0	2	
Gross Domestic Product	\$ Mill.	\$0.0	\$0.0	
Output	\$ Mill.	\$0.0	-\$1.0	
Value Added	\$ Mill.	\$0.0	\$0.0	
Relative Composite Input Costs	Proportion	0.0%	0.0%	
Relative Delivered Price	Proportion	0.0%	0.0%	
Relative Cost of Production	Proportion	0.0%	0.0%	

HIGH COST SCENARIO		Costs (per year) – Compostable Materials		
Year	Measure	2015	2018	
Total Employment	Jobs	1	-4	
Laboratory Services (Mgmt. Sci & Tech Consult.)	Jobs	8	7	
Waste Mgmt. & Remediation Svcs.	Jobs	56	43	
Gross Domestic Product	\$ Mill.	\$4.0	-\$15.0	
Output	\$ Mill.	\$2.0	-\$5.0	
Value Added	\$ Mill.	\$0.0	\$0.0	
Relative Composite Input Costs	Proportion	0.1%	0.1%	
Relative Delivered Price	Proportion	0.3%	0.3%	
Relative Cost of Production	Proportion	0.3%	0.3%	

HIGH COST SCENARIO		Costs (per year) – In-Vessel Digestion		
Year	Measure	2015	2018	
Total Employment	Jobs	4	4	
Laboratory Services (Mgmt. Sci & Tech Consult.)	Jobs	0	0	
Waste Mgmt. & Remediation Svcs.	Jobs	0	14	
Gross Domestic Product	\$ Mill.	\$0.0	\$0.0	
Output	\$ Mill.	\$0.0	\$1.0	
Value Added	\$ Mill.	\$0.0	\$0.0	
Relative Composite Input Costs	Proportion	0.0%	0.0%	
Relative Delivered Price	Proportion	0.0%	0.1%	
Relative Cost of Production	Proportion	0.0%	0.1%	

# Standardized Regulatory Impact Assessment

## CalRecycle – Compostable Materials and Transfer/Processing Regulations

Table 4: Estimated Total Cost of Compostable Materials and In-vessel Digestion Regulations: Low and High Cost Range

LOW COST SCENARIO		Costs (per year)	
Year	Measure	2015	2018
Total Employment	Jobs	0	-4
Laboratory Services (Mgmt. Sci & Tech Consult.)	Jobs	2	2
Waste Mgmt. & Remediation Svcs.	Jobs	0	4
Gross Domestic Product	\$ Mill.	\$0.0	\$0.0
Output	\$ Mill.	\$0.0	-\$1.0
Value Added	\$ Mill.	\$0.0	\$0.0

HIGH COST SCENARIO		Costs (per year)	
Year	Measure	2015	2018
Total Employment	Jobs	5	0
Laboratory Services (Mgmt. Sci & Tech Consult.)	Jobs	8	7
Waste Mgmt. & Remediation Svcs.	Jobs	56	57
Gross Domestic Product	\$ Mill.	\$4.0	-\$15.0
Output	\$ Mill.	\$2.0	-\$4.0
Value Added	\$ Mill.	\$0.0	\$0.0

### E. Agency's Interpretation of the Results of the Assessment of the Economic Impact

From the detailed REMI output, nine key cost components that comprise the annual total cost were selected, and these are displayed in Table 3 as changes occurring in three separate categories, within three groups: Employment, Output, and Relative Cost. It is important to note that these changes are from a baseline of growth in the compost industry for each year, as specified in the assumptions. The assessment estimates the overall change in the number of jobs in the U.S. economy and the ancillary jobs (almost entirely California-based) associated with compliance and enforcement of the proposed regulations.

Employment changes resulting from indirect and induced impacts of the regulation are forecasted for three groups: Total Employment, Laboratory Services (LS), and Waste Management and Remediation Services (WMRS). Under the Low Cost scenarios, the total California net job changes, for each representative year, are shown in the first line. The second and third lines show the annual job changes for LS industry sector, and the WMRS Sectors.

In general, while some economic models may predict that the higher costs resulting from the proposed regulations should lead to job losses, the Department expects the proposed regulations to create positive, net job growth. This growth will be seen in the waste management, remediation and laboratory services industries and will result from the greater certainty for investment offered by the regulations and from the efforts of businesses to comply at lower cost (for example, by receiving feedstock with lower contaminant levels, as previously discussed in Section C.).

In 2018, it is estimated that under both of the Low Cost Scenarios there will be one additional job created in Laboratory Services, and two additional jobs in the WMRS sector.

# Standardized Regulatory Impact Assessment

## CalRecycle – Compostable Materials and Transfer/Processing Regulations

However, two jobs will be lost somewhere in the economy, as the regulation results in a net increase of one job, not the three jobs created in the specific industry sectors.

Under the High Cost scenarios, there will be seven additional jobs in the LS sector and 57 additional jobs in the WMRS sector. Four jobs will be gained and four jobs will be lost somewhere in the economy.

Gross Domestic Product changes resulting from indirect and induced impacts of the regulation are forecasted, as well related Economic Output and Value Added to the National economy. As the REMI model displays inputs and outputs in these categories in the billions of dollars, the model output for these categories is rounded to the nearest million. The values shown in Table 3 are in 2005 dollars, to be consistent with the REMI model output values. These values should be multiplied by 1.175 to be directly comparable to the values shown in Table 1.

For the Low Cost scenarios, this GDP changes and Output changes are on the same order of magnitude as the estimates made for Direct Costs, shown in Table 1.

The GDP reduction under the High Cost Scenarios for the year 2018 is estimated at \$15 million for the Compost Materials, and at \$0 for the In-Vessel Digestion.

The values determined by the model for the changes in GDP, Economic Output, and Value Added are roughly what would be expected from the imposition of a cost upon a specific industry or sector of the economy. As stated above, these costs – in terms of dollars and jobs - are completely separate from the economic value and jobs created by the expanding California composting industry.

Relative Composite Costs and Prices are the changes, in percent from baseline, for the three categories: Relative Composite Input Costs, Relative Delivered Price, and Relative Cost of Production. These three values are all specific to the WMRS industry sector, and measure the changes to the production costs for this industry. The costs and prices are all positive values, showing increases.

In the Low Cost scenarios, no measurable changes are observed in the model.

In the High Cost scenarios, the changes in Relative Composite Input Costs remains measurably unchanged, across all years. The Relative Delivered Price increases in the early years of the In-vessel Digestion forecast by 0.1%, and in the later years by 0.2%. For Compostable Materials forecast, the Relative Cost of Production under the High Cost scenario increases at 0.3% annually.

Not shown in the detailed REMI output in Table 3 are additional quantitative impacts that occur outside the specific sectors mentioned above (i.e., the three groups: Employment, Output, and Relative Cost). It is important to note that these changes are from a baseline of growth in the compost industry for each year, as specified in the assumptions. Not included in this table are indirect and induced effects related to direct expenditures on machinery, in the year that these impacts occurred. The REMI model amortizes these expenditures over a period of years, and even the combined impact of multiple expenditures over a period of years is so small that it does not appear in the output of the model results.

# Standardized Regulatory Impact Assessment

## CalRecycle – Compostable Materials and Transfer/Processing Regulations

### III. CRITERIA

#### A. Creation or Elimination of Jobs within the State

The proposed regulatory action may create between four and 57 new jobs at compostable material handling and in-vessel digestion facilities due to the hiring additional laborers to manually remove physical contaminants or operate equipment to remove physical contaminants, designing and maintaining roads, providing adequate lighting, and providing and maintaining visual screening, and up to 7 additional jobs at laboratories that analyze percent contamination. Compostable material handling and in-vessel digestion facilities may also need to purchase additional equipment to remove physical contaminants which may create new equipment manufacturing and/or maintenance/repair jobs in California.

#### B. Creation of New Businesses or the Elimination of Existing Businesses within the State

Based on this assessment, the proposed regulations would not affect the creation or elimination of businesses within California. Currently, these types of solid waste operations and facilities are subject to either the Transfer/Processing Operations and Facilities Regulatory Requirements (California Code of Regulations, Title 14, Division 7, Chapter 3, Articles 6.0 – 6.35) or the Compostable Material Handling Operations and Facilities Regulatory Requirements (California Code of Regulations, Title 14, Division 7, Chapter 3.1).

#### C. Competitive Advantages or Disadvantages for Businesses Currently Doing Business Within the State

The proposed regulations revisions would not impact the ability of California businesses to compete with businesses in other states to produce goods or services within California. The proposed regulations revisions are intended to create more equitable compostable material handling and in-vessel digestion business competition within California.

#### D. Increase or Decrease of Investment in the State

The results of this assessment do not indicate whether the proposed regulations would either increase or decrease investment in the State.

#### E. Incentives for Innovation in Products, Materials, or Processes

One proposed change in these regulations is a standard for compostable material applied to land, and compost produced at a regulated operation or facility, to meet a 0.1% physical contaminant limit. The Department assumes operators will incur costs associated with removing contaminants from feedstock or product to meet this standard. Initially, operators may employ labor and/or utilize available equipment (e.g., screens) to remove contaminants. Moving forward, the Department anticipates the standard may stimulate the development of innovative equipment or physical processes to more efficiently and cost-effectively remove contaminants.

# Standardized Regulatory Impact Assessment

## CalRecycle – Compostable Materials and Transfer/Processing Regulations

### F. Benefits of the Regulations

The principal benefit of the proposed regulations is protecting public health, safety and the environment. Requiring compost products to meet a 0.1% physical contaminant limit will reduce litter and minimize the amount of plastic entering surface water and the ocean while creating new jobs and increasing the market value of compost. Establishing criteria for safe land application of compostable material will reduce litter and minimize the amount of plastic entering surface water and the ocean and improve food safety and animal health by reducing toxic metals, disease-causing organisms, physical contaminants, and invasive/noxious species in compostable material. Other benefits of the proposed regulations include minimizing odors at compostable material handling and in-vessel digestion facilities; decreasing greenhouse gases, air pollution, and long-distance transportation of organic material by facilitating small-scale composting; providing clarity to the regulated community and regulators. Finally, the regulations will ensure safe operations and facilities to handle organic material diverted as the result of California’s goal to source-reduce, recycle, or compost 75% of the solid waste generated in the State by 2020.

The new, “stand-alone” In-vessel digestion portion of the proposed regulations will establish a clear regulatory framework for the digestion of organic material. Digesting this material will decrease greenhouse gas generation and increase production of biofuels/bioenergy.

## IV. CONCLUSIONS

### A. Description of the Costs and All Benefits Due to the Proposed Regulatory Change

#### Costs

The Department estimates the economic impact of this regulation (including the fiscal impact) is over \$50 million.

Table 5: Summary of Total Costs

LOW COST SCENARIO			
Year		2015	2018
Compostable Materials		\$797,587	\$846,407
In-Vessel Digestion		\$7,380	\$774,563
Total		\$804,967	\$1,620,970

  

HIGH COST SCENARIO			
Year		2015	2018
Compostable Materials		\$50,762,353	\$53,869,415
In-Vessel Digestion		\$8,646	\$9,679,347
Total		\$50,770,999	\$63,548,762

#### Benefits

# Standardized Regulatory Impact Assessment

## CalRecycle – Compostable Materials and Transfer/Processing Regulations

The principal benefit of the proposed regulations is protecting public health, safety and the environment. Requiring compost products to meet a 0.1% physical contaminant limit will reduce litter and minimize the amount of plastic entering surface water and the ocean while creating new jobs and increasing the market value of compost. Establishing criteria for safe land application of compostable material will reduce litter and minimize the amount of plastic entering surface water and the ocean and improve food safety and animal health by reducing toxic metals, disease-causing organisms, physical contaminants, and invasive/noxious species in compostable material. Other benefits of the proposed regulations include minimizing odors at compostable material handling and in-vessel digestion facilities; decreasing greenhouse gases, air pollution, and long-distance transportation of organic material by facilitating small-scale composting; providing clarity to the regulated community and regulators. Finally, the regulations will ensure safe operations and facilities to handle organic material diverted as the result of California's goal to source-reduce, recycle, or compost 75% of the solid waste generated in the State by 2020.

The new, "stand-alone" In-vessel digestion portion of the proposed regulations will establish a clear regulatory framework for the digestion of organic material. Digesting this material will decrease greenhouse gas generation and increase production of biofuels/bioenergy.

### **B. Description of the Costs and Benefits of Alternatives Considered, and Reason(s) for Rejecting Alternative(s)**

Alternative 1: No action.

Cost: There would be no cost associated with this alternative.

Benefits: This alternative would not achieve any of the benefits listed in the above section - *Description of the Costs and All Benefits Due to the Proposed Regulatory Change*.

Reason for Rejecting: The no action alternative would not address the stated need for the regulations, namely protecting public health, safety, and the environment.

Alternative 2: Increase the physical contaminant level of compost and land applied material to a higher limit than 0.1%.

Cost: While increasing the allowable physical contaminant level may seem like it would reduce labor and capital costs, staff does not estimate a significant cost savings. Based on stakeholder input, there will be certain amount of baseline level of costs (e.g., equipment capital costs; basic labor costs) regardless of the physical contaminant level set. Therefore, the Department does not anticipate a direct correlation between increasing the physical contaminant level and a reduction in costs. The Department modeled the cost of increasing the physical contaminant level that would result in an estimated 30% reduction in labor costs, with equipment and other capital costs remaining fixed. The results of the modeling are represented in Table 6.

Benefits: Increasing the allowable physical contaminant level would increase revenues for Compostable Material Handling Facilities and Operations, as more product could be sold in segments of the agriculture and erosion control markets where higher physical

# Standardized Regulatory Impact Assessment

## CalRecycle – Compostable Materials and Transfer/Processing Regulations

contaminants levels are acceptable. However, increasing the allowable physical contaminant level would negatively impact public health, safety, and the environment (see Reason for Rejecting below).

Reason for Rejecting: Increasing the physical contaminant level would not address the stated need for the regulations, namely protecting public health, safety, and the environment. Increasing the physical contaminant level could: 1) adversely impact food safety and animal health by increasing toxic metals and disease-causing organisms in compostable material; 2) increase the amount of plastic entering surface water and the ocean; and 3) increase litter in areas where compost and compostable material is applied.

Table 6: Alternative 2 - Estimated Total Cost of Compostable Materials and In-vessel Digestion Regulations:  
Low and High Cost Range

LOW COST SCENARIO		Costs (per year)	
Year	Measure	2015	2018
Total Employment	Jobs	0	-4
Laboratory Services (Mgmt. Sci & Tech Consult.)	Jobs	2	2
Waste Mgmt. & Remediation Svcs.	Jobs	0	4
Gross Domestic Product	\$ Mill.	\$0.0	\$0.0
Output	\$ Mill.	\$0.0	-\$1.0
Value Added	\$ Mill.	\$0.0	\$0.0

HIGH COST SCENARIO		Costs (per year)	
Year	Measure	2015	2018
Total Employment	Jobs	-4	-9
Laboratory Services (Mgmt. Sci & Tech Consult.)	Jobs	6	5
Waste Mgmt. & Remediation Svcs.	Jobs	-5	17
Gross Domestic Product	\$ Mill.	-\$27.0	-\$52.0
Output	\$ Mill.	-\$10.0	-\$20.0
Value Added	\$ Mill.	\$0.0	\$1.0

### C. Impact on General Fund and Special Funds

Department staff has determined that the proposed regulation does not impose a mandate on local agencies or school districts.

Department staff has further determined that the proposed regulation does not impact: 1) any costs to local government, which must be reimbursed pursuant to Section 6 of Article XIII B of the California Constitution and Part 7 (commencing with Section 17500) of Division 4 of the Government Code; 2); any savings to local government; 3) any savings or other impacts such as revenue changes to state agencies; and 4) any additional federal funding or reduction in federal funding to the state.

Costs to local government, which are not reimbursable under Section 6 of Article XIII B of the California Constitution but which will necessarily be incurred in reasonable compliance with the regulations, and which could result in a revenue change(s), are outlined in Appendix B-2 and B-4.

# Standardized Regulatory Impact Assessment

## CalRecycle – Compostable Materials and Transfer/Processing Regulations

Costs to state agencies that will be incurred in reasonable compliance, administration, implementation, and/or enforcement by the Department and other state agencies are outlined in Appendix B-2 and B-4.

**Private Compostable Material Handling Operations and Facilities**  
**Preliminary Estimates**

<b>Agricultural Material Composting Operations (94 active)</b>	
Odor:	Prepare BMP Report: \$5,000 - \$10,450/operation x 0 active operations/yr. = \$0/yr. <i>Based on estimates obtained from industry consultants; only facilities accepting mixed material are likely to prepare a BMP report</i>
	Implement BMP Report: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x (80 – 160 hrs.)/yr. = \$2,492 - \$4,984/yr. per operation \$2,492 - \$4,984/yr. per operation x 0 active operations = \$0/yr. <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; only facilities accepting mixed material are likely to implement a BMP report</i>
1.0% Physical Contaminants: (incoming)	Visual observation of loads: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x (1/3 to 1/2 hr.) x 260 operating days/yr. = \$2,696.97 - \$4,049.50/yr. per operation \$2,696.97 - \$4,049.50/yr. per operation x 40 operations = \$107,879 - \$161,980/yr. <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to visually observe loads; staff estimates less than 50% of agricultural material composting operations accept green material and will need to visually inspect loads.</i>
0.1% Physical Contaminants: (outgoing)	Sampling and analysis: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x 1/2 hr. = \$10.37 \$10.37 + \$48.00 lab cost = \$58.37/sample \$58.37/sample x 0 samples/yr. = \$0/yr. <i>Average total hourly compensation(wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to collect samples; current laboratory pricing; staff estimates that only facilities accepting mixed material will need to sample outgoing material</i>
	Removing contaminants: (\$0 - \$11)/ton x 0 tons/yr. x 0 active operations = \$0/yr. <i>Based on estimates from industry: some operations/facilities are already meeting this standard, some will need to hire additional labor and/or purchase additional equipment to meet the standard; agricultural material composting operations can only accept green material with less than 1% physical contamination, and agricultural material composting operations should meet the 0.1% physical contaminant limit for finished compost.</i>
<b>Subtotal Cost</b> <b>\$107,879 - \$161,980/yr.</b>	
<b>Biosolids Composting Operations at POTWs (1 active)</b>	
Odor:	Prepare BMP Report: \$5,000 - \$10,450/operation x 0 operations/yr. = \$0/yr. <i>Based on estimates obtained from industry consultants; only facilities accepting mixed material are likely to prepare a BMP report</i>
	Implement BMP Report: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x (80 – 160 hrs.)/yr. = \$2,492 - \$4,984/yr. per operation \$2,492 - \$4,984/yr. per operation x 0 operations = \$0/yr. <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; only facilities accepting mixed material are likely to implement a BMP report</i>
1.0% Physical Contaminants: (incoming)	Visual observation of loads: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x (1/3 to 1/2 hr.) x 260 operating days/yr. = \$2,696.97 - \$4,049.50/yr. per operation \$2,696.97 - \$4,049.50/yr. per operation x 1 operation = \$2,696.97 - \$4,049.50/yr. <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to visually observe loads; all biosolids composting operations at POTWs must visually sample loads.</i>
0.1% Physical Contaminants: (outgoing)	Sampling and analysis: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x 1/2 hr. = \$10.37 \$10.37 + \$48.00 lab cost = \$58.37/sample \$58.37/sample x 1 sample/yr. x = \$58.37/yr. <i>Average total hourly compensation(wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to collect samples; current laboratory pricing; staff estimates that only facilities accepting mixed material will need to sample outgoing material</i>
	Removing contaminants: (\$0 - \$11)/ton x 82,210 tons of avg. operation/yr. x 1 operation = \$0 to \$904,310/yr. <i>Based on estimates from industry: some operations/facilities are already meeting this standard, some will need to hire additional labor and/or purchase additional equipment to meet the standard; biosolids composting operations can only accept green material with less than 1% physical contamination, and most biosolids composting operations should meet the 0.1% physical contaminant limit for finished compost; tonnage based on current estimated throughput.</i>
<b>Subtotal Cost</b> <b>\$2,755 - \$908,418/yr.</b>	
<b>Research Composting Operations (18 active)</b>	
Odor:	Prepare BMP Report: \$5,000 - \$10,450/operation x 0 operations/yr. = \$0/yr. <i>Based on estimates obtained from industry consultants; only facilities accepting mixed material are likely to prepare a BMP report</i>
	Implement BMP Report: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x (80 – 160 hrs.)/yr. = \$2,492 - \$4,984/yr. per operation \$2,492 - \$4,984/yr. per operation x 0 operations = \$0/yr. <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; only facilities accepting mixed material are likely to implement a BMP report</i>
2-Year Report:	Prepare 2-yr. Report: \$35.88/hr. + \$15.86/hr. = \$51.74/hr. \$51.74/hr. x 8 hrs./yr. = \$413.92/yr. per operation \$413.92/yr. per operation x 9 operations/yr. = \$3,725.28/yr. <i>Average total hourly compensation (wages and benefits) of private management, professional, and related - US Bureau of Labor Statistics; staff estimate of time to prepare report; staff estimates 50% of research operations will submit report to extend research operation.</i>

Subtotal Cost		\$3,725.28/yr.
<b>Green Material Composting Operations (59 active)</b>		
12,500 Cubic Yard Storage:	Cost for submitting request in writing for SSA: \$35.88/hr. + \$15.86/hr. = \$51.74/hr. \$51.74/hr. x (1 - 2 hrs.)/yr. per operation x 6 operations = \$310.44 - \$620.88/yr. <i>Average total hourly compensation (wages and benefits) of private management, professional, and related - US Bureau of Labor Statistics; staff estimate of time to complete request submittal; staff estimates 10% of operations will submit SSA request.</i>	
Odor:	Prepare BMP Report: \$5,000 - \$10,450/operation x 0 operations/yr. = \$0/yr. <i>Based on estimates obtained from industry consultants; only facilities accepting mixed material are likely to prepare a BMP report</i>	
	Implement BMP Report: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x (80 - 160 hrs.)/yr. = \$2,492 - \$4,984/yr. per operation \$2,492 - \$4,984/yr. per operation x 0 operations = \$0/yr. <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; only facilities accepting mixed material are likely to implement a BMP report.</i>	
1.0% Physical Contaminants: (incoming)	Visual observation of loads: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x (½ to ½ hr.) x 260 operating days/yr. = \$2,696.97 - \$4,049.50/yr. per operation \$2,696.97 - \$4,049.50/yr. per operation x 59 operations = \$159,121 - \$238,920.50/yr. <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to visually observe loads; all green material composting operations must visually sample loads.</i>	
0.1% Physical Contaminants: (outgoing)	Sampling and analysis: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x ½ hr. = \$10.37 \$10.37 + \$48.00 lab cost = \$58.37/sample \$58.37/sample x 6 samples/yr. = \$350.22/yr. <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to collect samples; current laboratory pricing; staff estimates that EA will request a sample from 10% of green material composting operators (6).</i>	
	Removing contaminants: (\$0 - \$11)/ton x (529,188 tons/35 operations = 15,120 tons of avg. operation/yr.) x 6 operations = \$0 to \$997,920/yr. <i>Based on estimates from industry: some operations/facilities are already meeting this standard, some will need to hire additional labor and/or purchase additional equipment to meet the standard. (Add breakdown to matrix); green material composting operations can only accept green material with less than 1% physical contamination, and most green material composting operations should meet the 0.1% physical contaminant limit for finished compost; tonnage based on current estimated throughput.</i>	
	Subtotal Cost	
		\$159,781.66 - \$1,237,812/yr.
<b>Green Material Composting Facilities (26 active)</b>		
Odor:	Prepare BMP Report: \$5,000 - \$10,450/facility x 0 facilities/yr. = \$0/yr. <i>Based on estimates obtained from industry consultants; only facilities accepting mixed material are likely to prepare a BMP report</i>	
	Implement BMP Report: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x (80 - 160 hrs.)/yr. = \$2,492 - \$4,984/yr. per facility \$2,492 - \$4,984/yr. per facility x 0 facilities = \$0/yr. <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in BMP report; only facilities accepting mixed material are likely to implement a BMP report.</i>	
1.0% Physical Contaminants: (incoming)	Visual observation of loads: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x (½ to ½ hr.) x 260 operating days/yr. = \$2,696.97 - \$4,049.50/yr. per facility \$2,696.97 - \$4,049.50/yr. per facility x 26 facilities = \$70,121 - \$105,287/yr. <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to visually observe loads; all green material composting facilities must visually sample loads.</i>	
0.1% Physical Contaminants: (outgoing)	Sampling and analysis: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x ½ hr. = \$10.37 \$10.37 + \$48.00 lab cost = \$58.37/sample \$58.37/sample x 351 samples/yr. = \$20,487.87/yr. <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to collect samples; current laboratory pricing; number of samples based on current estimated throughput being sampled every 5,000 cubic yards.</i>	
	Removing contaminants: (\$0 - \$11)/ton x 877,200 tons /yr. x = \$0 to \$9,649,200/yr. <i>Based on estimates from industry: some operations/facilities are already meeting this standard, some will need to hire additional labor and/or purchase additional equipment to meet the standard; green material composting facilities can only accept green material with less than 1% physical contamination, and most green material composting operations should meet the 0.1% physical contaminant limit for finished compost; tonnage based on current estimated throughput.</i>	
		Subtotal Cost
		\$90,609 - \$9,774,975/yr.
<b>Vegetative Food Material Composting Facilities (≤ 12,500 cubic yards) (0 active)</b>		
Odor:	Prepare BMP Report: \$5,000 - \$10,450/operation x 0 active operations/yr. = \$0/yr. <i>Based on estimates obtained from industry consultants; only facilities accepting mixed material are likely to prepare a BMP report</i>	
	Implement BMP Report: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x (80 - 160 hrs.)/yr. = \$2,492 - \$4,984/yr. per facility \$2,696.97 - \$4,049.50/yr. per facility x 0 active facilities = \$0/yr. <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in BMP report; only facilities accepting mixed material are likely to implement a BMP report.</i>	
1.0% Physical Contaminants: (incoming)	Visual observation of loads: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x (½ to ½ hr.) x 260 operating days/yr. = \$2,696.97 - \$4,049.50/yr. per facility \$2,696.97 - \$4,049.50/yr. per facility x 0 active facilities = \$0/yr. <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to visually observe loads; zero existing vegetative food material composting facilities.</i>	
0.1% Physical Contaminants:	Sampling and analysis: \$21.54/hr. + \$9.61/hr. = \$31.15/hr.	

(outgoing)	<p>\$31.15/hr. x ½ hr. = \$10.37  \$10.37+ \$48.00 lab cost = \$58.37/sample  \$58.37/sample x 0 samples/yr. = \$0/yr.  Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to collect samples; current laboratory pricing; zero existing vegetative food material composting facilities.</p> <p>Removing contaminants: (\$0- \$11)/ton x tons/yr. x 0 active facilities = \$0/yr.  Based on estimates from industry: some operations/facilities are already meeting this standard, some will need to hire additional labor and/or purchase additional equipment to meet the standard; zero existing vegetative food material composting facilities.</p>	
<b>Subtotal Cost</b>		<b>\$0/yr.</b>
<b>Vegetative Food Material Composting Facilities (&gt; 12,500 cubic yards) (0 active)</b>		
Odor:	<p>Prepare BMP Report: \$5,000 - \$10,450/operation x 0 active facilities/yr. = \$0/yr.  Based on estimates obtained from industry consultants; only facilities accepting mixed material are likely to prepare a BMP report.</p> <p>Implement BMP Report: \$21.54/hr. + \$9.61/hr. = \$31.15/hr.  \$31.15/hr. x (80 – 160 hrs.)/yr. = \$2,492 - \$4,984/yr. per facility  \$2,696.97 - \$4,049.50/yr. per facility x 0 active facilities = \$0/yr.  Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in BMP report; only facilities accepting mixed material are likely to implement a BMP report.</p>	
1.0% Physical Contaminants: (incoming)	<p>Visual observation of loads: \$21.54/hr. + \$9.61/hr. = \$31.15/hr.  \$31.15/hr. x (½ to ½ hr.) x 260 operating days/yr. = \$2,696.97 - \$4,049.50/yr. per facility  \$2,696.97 - \$4,049.50/yr. per facility x 0 active facilities = \$0/yr.  Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to visually observe loads; zero existing vegetative food material composting facilities.</p>	
0.1% Physical Contaminants: (outgoing)	<p>Sampling and analysis: \$21.54/hr. + \$9.61/hr. = \$31.15/hr.  \$31.15/hr. x ½ hr. = \$10.37  \$10.37 + \$48.00 lab cost = \$58.37/sample  \$58.37/sample x 0 samples/yr. = \$0/yr.  Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to collect samples; current laboratory pricing; zero existing vegetative food material composting facilities.</p> <p>Removing contaminants: (\$0 - \$11)/ton x tons/yr. x 0 active facilities = \$0/yr.  Based on estimates from industry: some operations/facilities are already meeting this standard, some will need to hire additional labor and/or purchase additional equipment to meet the standard; zero existing vegetative food material composting facilities.</p>	
<b>Subtotal Cost</b>		<b>\$0/yr.</b>
<b>Composting Facilities (all) (e.g., biosolids, digestate, food material, mixed) (30 active)</b>		
Odor:	<p>Prepare BMP Report: \$5,000 - \$10,450 x 1 facility/yr. = \$5,000 - \$10,450/yr.  Based on estimates obtained from industry consultants; staff estimates one composting facility per year will prepare a BMP report based on current odor violations.</p> <p>Implement BMP Report: \$21.54/hr. + \$9.61/hr. = \$31.15/hr.  \$31.15/hr. x (80 – 160 hrs.)/yr. = \$2,492 - \$4,984/yr. per facility  \$2,492 - \$4,984/yr. per facility x 1 facility = \$2,492 - \$4,984/yr.  Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in BMP report; staff estimates one composting facility per year will implement a BMP report.</p>	
0.1% Physical Contaminants: (outgoing)	<p>Sampling and analysis: \$21.54/hr. + \$9.61/hr. = \$31.15/hr.  \$31.15/hr. x ½ hr. = \$10.37  \$10.37 + \$48.00 lab cost = \$58.37/sample  \$58.37/sample x 1186 samples/yr. x = \$69,226.82/yr.  Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to collect samples; current laboratory pricing; number of samples based on current estimated throughput being sampled every 5,000 cubic yards.</p> <p>Removing contaminants: \$0-11/ton x 2,968,288 tons/yr. = \$0 - \$32,651,168/yr.  Based on estimates from industry: some operations/facilities are already meeting this standard, some will need to hire additional labor and/or purchase additional equipment to meet the standard; tonnage based on current estimated throughput.</p>	
<b>Subtotal Cost</b>		<b>\$76,719 - \$32,735,829/yr.</b>
<b>Chipping and Grinding Operations (≤ 200 tons/day) (55 active)</b>		
Odor:	<p>Prepare BMP Report: \$5,000 - \$10,450/operation x 0 operations/yr. = \$0/yr.  Based on estimates obtained from industry consultants; only facilities accepting mixed material are likely to prepare a BMP report.</p> <p>Implement BMP Report: \$21.54/hr. + \$9.61/hr. = \$31.15/hr.  \$31.15/hr. x (80 – 160 hrs.)/yr. = \$2,492 - \$4,984/yr. per operation  \$2,492 - \$4,984/yr. per operation x 0 operations = \$0/yr.  Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in BMP report; only operations accepting mixed material are likely to implement a BMP report.</p>	
1.0% Physical Contaminants: (incoming)	<p>Visual observation of loads: \$21.54/hr. + \$9.61/hr. = \$31.15/hr.  \$31.15/hr. x (½ to ½ hr.) x 260 operating days/yr. = \$2,696.97 - \$4,049.50/yr. per operation  \$2,696.97 - \$4,049.50/yr. per operation x 55 operations = \$148,333.35 - \$222,722.50/yr.  Average total hourly compensation(wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to collect samples; current laboratory pricing; all chip and grind operations must visually sample loads.</p>	
<b>Subtotal Cost</b>		<b>\$148,333.35 - \$222,722.50/yr.</b>
<b>Chipping and Grinding Facilities (&gt; 200 and ≤ 500 tons/day) (9 active)</b>		
Odor:	<p>Prepare BMP Report: \$5,000 - \$10,450/facility x 0 facilities/yr. = \$0/yr.  Based on estimates obtained from industry consultants; only facilities accepting mixed material are likely to prepare a BMP report.</p> <p>Implement BMP Report: \$21.54/hr. + \$9.61/hr. = \$31.15/hr.  \$31.15/hr. x (80 – 160 hrs.)/yr. = \$2,492 - \$4,984/yr. per facility</p>	

	<p>\$2,492 - \$4,984/yr. per facility x 0 facilities = \$0/yr.</p> <p><i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in BMP report; only operations accepting mixed material are likely to implement a BMP report.</i></p>
1.0% Physical Contaminants: (incoming)	<p>Visual observation of loads: \$21.54/hr. + \$9.61/hr. = \$31.15/hr.</p> <p>\$31.15/hr. x (1/8 to 1/2 hr.) x 260 operating days/yr. = \$2,696.97 - \$4,049.50/yr. per facility</p> <p>\$2,696.97 - \$4,049.50/yr. per facility x 9 facilities/yr. = \$24,272.73 - \$36,445.50/yr.</p> <p><i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to collect samples; current laboratory pricing; all chip and grind facilities must visually sample loads.</i></p>
<b>Subtotal Cost</b>	
<b>\$24,272.73 - \$36,445.50/yr.</b>	
<b>Chipping and Grinding Facilities (&gt; 500 tons/day) (11 active)</b>	
Odor:	<p>Prepare BMP Report: \$5,000 - \$10,450/facility x 0 facilities/yr. = \$0/yr.</p> <p><i>Based on estimates obtained from industry consultants; only facilities accepting mixed material are likely to prepare a BMP report</i></p> <p>Implement BMP Report: \$21.54/hr. + \$9.61/hr. = \$31.15/hr.</p> <p>\$31.15/hr. x (80 - 160 hrs.)/yr. = \$2,492 - \$4,984/yr. per facility</p> <p>\$2,492 - \$4,984/yr. per facility x 0 facilities = \$0/yr.</p> <p><i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in BMP report; only facilities accepting mixed material are likely to implement a BMP report.</i></p>
1.0% Physical Contaminants: (incoming)	<p>Visual observation of loads: \$21.54/hr. + \$9.61/hr. = \$31.15/hr.</p> <p>\$31.15/hr. x (1/8 to 1/2 hr.) x 260 operating days/yr. = \$2,696.97 - \$4,049.50/yr. per facility</p> <p>\$2,696.97 - \$4,049.50/yr. per facility x 11 facilities/yr. = \$29,666.67 - \$44,544.40/yr.</p> <p><i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to collect samples; current laboratory pricing; all chip and grind facilities must visually sample loads.</i></p>
<b>Subtotal Cost</b>	
<b>\$29,666.67 - \$44,544.50/yr.</b>	
<b>Land Application</b>	
Sampling and Analysis:	<p>Sampling and analysis: \$21.54/hr. + \$9.61/hr. = \$31.15/hr.</p> <p>\$31.15/hr. x 1/8 hr. = \$10.37</p> <p>\$10.37 + \$300.00 lab cost = \$310.37/sample</p> <p>1,000,000 tons ÷ (30 - 600 tons)/acre ÷ (10 - 622 acres)/site = 3 - 3,333 sites</p> <p>3 - 3,333 sites x \$310.37/sample = \$931.11 - \$1,034,463/yr.</p> <p><i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to collect samples; current laboratory pricing. The proposed regulations do not specify a sample frequency, therefore, the number of samples is based on an estimate of application sites. The number of application sites is based on estimates of tonnage available for land applied annually, range of application rate, and range of application site area.</i></p>
0.1% Physical Contaminants: (outgoing)	<p>Removing contaminants:</p> <p>1,000,000 tons x 10% needs to be cleaned = 100,000 tons</p> <p>(\$0 - \$11/ton) x 100,000 tons = \$0 - \$1,100,000/yr.</p> <p><i>Tonnage available for land application and amount of material that will need to be cleaned annually based on staff estimates; contaminant removal costs based on estimates from industry: some operations/facilities are already meeting this standard, some will need to hire additional labor and/or purchase additional equipment to meet the standard.</i></p>
CDFA Determination:	<p>Determination of "agronomically beneficial": \$54.75/hr. + \$30.25/hr. = \$85/hr.</p> <p>\$85/hr. x 8 hrs./site x 3 sites/yr. = \$2,040/yr.</p> <p><i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of time to process a request for an "agronomically beneficial" determination; staff estimate on the number of sites that will request an "agronomically beneficial" determination.</i></p>
<b>Subtotal Cost</b>	
<b>\$2,971 - \$2,136,503/yr.</b>	
<b>Total Cost</b>	
<b>\$ 646,710 - \$47,262,955/yr.</b>	

Private In-vessel Digestion Operations and Facilities  
Preliminary Estimates

<b>Research In-vessel Digestion Operations (0 active)</b>	
2-Year Report:	Prepare 2-yr. Report: \$35.88/hr. + \$15.86/hr. = \$51.74/hr. \$51.74/hr. x 8 hrs. ÷ 2 yrs. = \$206.96/yr. per operation <i>Average total hourly compensation (wages and benefits) of private management, professional, and related - US Bureau of Labor Statistics; staff estimate of time to prepare report; reports are due after two years.</i>
Odor:	Prepare BMP Report: (\$5,000 - \$10,450)/operation (\$5,000 - \$10,450)/operation x 0 operations = \$0/yr. <i>Based on estimates obtained from industry consultants; staff estimates that no Research In-vessel Digestion Operations will prepare a BMP report.</i>
	Implement BMP Report: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x (80 hrs. - 160 hrs.)/yr. = (\$2,492 - \$4,984)/yr. per operation (\$2,492 - \$4,984)/yr. per operation x 0 operations = \$0/yr. <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; staff estimates that no Research In-vessel Digestion Operations will implement a BMP report.</i>
Biogas Control:	Take precautions to minimize uncontrolled release: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x 50 hrs./yr. = \$1,557.50/yr. per operation <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to take precautions to minimize uncontrolled release of biogas.</i>
Drainage and Spill Control:	Spill response = \$100/yr. per operation <i>Staff estimate of equipment and supplies costs.</i>
<b>Subtotal Cost (to any new In-vessel Digestion operation)</b>	
	<b>\$1,864.46/yr.</b>
Odor:	Prepare OIMP: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x (4 hrs. - 24 hrs.)/yr. = \$124.60 - \$747.60/yr. per operation <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to prepare OIMP.</i>
Site Restoration:	Provide notice; cleaning, and removal: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x 40 hrs./yr. = \$1,246/yr. Equipment use = (\$1,200 - \$1,500)/yr. (\$1,200 - \$1,500) + \$1,246 x one every 30 yrs. (1/30 yr.) x = \$81.53 - \$91.53/yr. per operation <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of equipment costs necessary to restore site. Site restoration only necessary upon site closure, which staff estimates will occur once every 30 years.</i>
<b>Subtotal cost (to an In-vessel Digestion op. that would have been regulated as a Transfer/Processing op.)</b>	
	<b>\$206.13 - \$839.13/yr.</b>
Personnel Health and Safety:	Make available IIPP: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x 1/8 hr./yr. = \$3.89/yr. per operation <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to make IIPP available for review.</i>
Roads:	Design and maintain roads: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x 50 hrs./yr. = \$1,557.50/yr. per operation Equipment: \$1,000/operation [\$159/yr. (10 year amortization)] \$1,557.50/yr. + \$159/yr. = \$1,716.50/yr. per operation <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of labor hours and equipment costs.</i>
Supervision and Personnel:	Provide contact information for operator and other responsible persons, in writing, to EA and operating record: \$35.88/hr. + \$15.86/hr. = \$51.74/hr. \$51.74/hr. x 1/2 hrs./yr. = \$25.87/yr. per operation <i>Average hourly compensation of private management, professional, and related - US Bureau of Labor Statistics; staff estimate of time to provide written information to EA and place in operating record.</i>
<b>Subtotal cost (to an in-vessel digestion op. that would have been regulated as a Composting op.)</b>	
	<b>\$1,746/yr.</b>
<b>Total cost (to an In-vessel Digestion op. that would have been regulated as a Transfer/Processing op.)</b>	
	<b>Any + TP = \$2,070.59 - \$2,703.59/yr.</b>
<b>Total cost (to an in-vessel digestion op. that would have been regulated as a Composting op.)</b>	
	<b>Any + CM = \$3,610.36/yr.</b>
<b>Dairy In-vessel Digestion Operations (0 active)</b>	
Odor:	Prepare BMP Report: (\$5,000 - \$10,450)/operation (\$5,000 - \$10,450)/operation x 0 operations = \$0/yr. <i>Based on estimates obtained from industry consultants; staff estimates that no Dairy In-vessel Digestion Operations will prepare a BMP report.</i>
	Implement BMP Report: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x (80 hrs. - 160 hrs.)/yr. = (\$2,492 - \$4,984)/yr. per operation (\$2,492 - \$4,984)/yr. per operation x 0 operations = \$0/yr. <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; staff estimates that no Dairy In-vessel Digestion Operations will implement a BMP report.</i>
Biogas Control:	Take precautions to minimize uncontrolled release: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr./hr. x 50 hrs./yr. = \$1,557.50/yr. per operation <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to take precautions to minimize uncontrolled release of biogas.</i>

Drainage and Spill Control:	Spill response = \$100/yr. per operation <i>Staff estimate of equipment and supplies costs.</i>	
Subtotal Cost (to any new In-vessel Digestion operation)		<b>\$1,657.50/yr.</b>
Odor:	Prepare OIMP: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x (4 hrs. - 24 hrs.)/yr. = \$124.60 - \$747.60/yr. per operation <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to prepare OIMP.</i>	
Site Restoration:	Provide notice; cleaning, and removal: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x 40 hrs./yr. = \$1,246/yr. per operation Equipment use = (\$1,200 - \$1,500)/yr. per operation (\$1,200 - \$1,500) + \$1,246 x one every 30 yrs. (1/30 yr.) x = \$81.53 - \$91.53/yr. per operation <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of equipment costs necessary to restore site. Site restoration only necessary upon site closure, which staff estimates will occur once every 30 years.</i>	
Subtotal cost (to an In-vessel Digestion op. that would have been regulated as a Transfer/Processing op.)		<b>\$206.13 - \$839.13/yr.</b>
Personnel Health and Safety:	Make available IIPP: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x 1/8 hr./yr. = \$3.89/yr. per operation <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to make IIPP available for review.</i>	
Roads:	Design and maintain roads: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x 100 hrs./yr. = \$3,115/yr. per operation Equipment: \$1,000/operation [\$159/yr. (10 year amortization)] \$3,115/yr. + \$159/yr. = \$3,274/yr. per operation <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of labor hours and equipment costs.</i>	
Supervision and Personnel:	Provide contact information for operator and other responsible persons, in writing, to EA and operating record: \$35.88 + \$15.86 = \$51.74/hr. \$51.74/hr. x 1/2 hrs./yr. = \$25.87/yr. per operation <i>Average total hourly compensation (wages and benefits) of private management, professional, and related - US Bureau of Labor Statistics; staff estimate of time to provide written information to EA and place in operating record.</i>	
Subtotal cost (to an in-vessel digestion op. that would have been regulated as a Composting op.)		<b>\$3,303/yr.</b>
Total cost (to an In-vessel Digestion op. that would have been regulated as a Transfer/Processing op.)		<b>Any + TP = \$1,863.63 - \$2,496.63/yr.</b>
Total cost (to an in-vessel digestion op. that would have been regulated as a Composting op.)		<b>Any + CM = \$4,961 /yr.</b>
<b>Distribution Center In-vessel Digestion Operations (0 active)</b>		
Odor:	Prepare BMP Report: (\$5,000 - \$10,450)/operation (\$5,000 - \$10,450)/operation x 0 operations = \$0/yr. <i>Based on estimates obtained from industry consultants; staff estimates that no Distribution Center In-vessel Digestion Operations will prepare a BMP report.</i>	
	Implement BMP Report: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x (80 hrs. - 160 hrs.)/yr. = (\$2,492 - \$4,984)/yr. per operation (\$2,492 - \$4,984)/yr. per operation x 0 operations = \$0/yr. <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; staff estimates that no Distribution Center In-vessel Digestion Operations will implement a BMP report.</i>	
Biogas Control:	Take precautions to minimize uncontrolled release: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr./hr. x 50 hrs./yr. = \$1,557.50/yr. per operation <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to take precautions to minimize uncontrolled release of biogas.</i>	
Drainage and Spill Control:	Spill response = \$100/yr. per operation <i>Staff estimate of equipment and supplies costs.</i>	
Subtotal Cost (to any new In-vessel Digestion operation)		<b>\$1,657.50/yr.</b>
Odor:	Prepare OIMP: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x (4 hrs. - 24 hrs.)/yr. = \$124.60 - \$747.60/yr. per operation <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to prepare OIMP.</i>	
Site Restoration:	Provide notice; cleaning, and removal: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x 40 hrs./yr. = \$1,246/yr. per operation Equipment use = (\$1,200 - \$1,500)/yr. per operation (\$1,200 - \$1,500) + \$1,246 x one every 30 yrs. (1/30 yr.) x = \$81.53 - \$91.53/yr. per operation <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of equipment costs necessary to restore site. Site restoration only necessary upon site closure, which staff estimates will occur once every 30 years.</i>	
Subtotal cost (to an In-vessel Digestion op. that would have been regulated as a Transfer/Processing op.)		<b>\$206.13 - \$839.13/yr.</b>
Personnel Health and Safety:	Make available IIPP: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x 1/8 hr./yr. = \$3.89/yr. per operation <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to make IIPP available for review.</i>	
Roads:	Design and maintain roads: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x 100 hrs./yr. = \$3,115/yr. per operation Equipment: \$1,000/operation [\$159/yr. (10 year amortization)] \$3,115/yr. + \$159/yr. = \$3,274/yr. per operation	

	Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of labor hours and equipment costs.	
Supervision and Personnel:	Provide contact information for operator and other responsible persons, in writing, to EA and operating record: \$35.88/hr. + \$15.86/hr. = \$51.74/hr. \$51.74/hr. x ½ hrs./yr. = \$25.87/yr. per operation <i>Average total hourly compensation (wages and benefits) of private management, professional, and related - US Bureau of Labor Statistics; staff estimate of time to provide written information to EA and place in operating record.</i>	
Subtotal cost (to an in-vessel digestion op. that would have been regulated as a Composting op.)		<b>\$3,303.76/yr.</b>
Total cost (to an In-vessel Digestion op. that would have been regulated as a Transfer/Processing op.)		<b>Any + TP = \$1,863.63 - \$2,496.63/yr.</b>
Total cost (to an in-vessel digestion op. that would have been regulated as a Composting op.)		<b>Any + CM = \$4,961.26/yr.</b>
<b>Limited Volume In-vessel Digestion Operations (0 active)</b>		
Odor:	Prepare BMP Report: (\$5,000 - \$10,450)/operation (\$5,000 - \$10,450)/operation x 0 operations = \$0/yr. <i>Based on estimates obtained from industry consultants; staff estimates that no Limited Volume In-vessel Digestion Operations will prepare a BMP report.</i>	
	Implement BMP Report: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x (80 hrs. - 160 hrs.)/yr. = (\$2,492 - \$4,984)/yr. per operation (\$2,492 - \$4,984)/yr. per operation x 0 operations = \$0/yr. <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; staff estimates that no Limited Volume In-vessel Digestion Operations will implement a BMP report.</i>	
Biogas Control:	Take precautions to minimize uncontrolled release: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr./hr. x 50 hrs./yr. = \$1,557.50/yr. per operation <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to take precautions to minimize uncontrolled release of biogas.</i>	
Drainage and Spill Control:	Spill response = \$100/yr. per operation <i>Staff estimate of equipment and supplies costs.</i>	
Subtotal Cost (to any new In-vessel Digestion operation)		<b>\$1,657.50/yr.</b>
Odor:	Prepare OIMP: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x (4 hrs. - 24 hrs.)/yr. = \$124.60 - \$747.60/yr. per operation <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to prepare OIMP.</i>	
Site Restoration:	Provide notice; cleaning, and removal: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x 40 hrs./yr. = \$1,246/yr. per operation Equipment use = (\$1,200 - \$1,500)/yr. per operation (\$1,200 - \$1,500) + \$1,246 x one every 30 yrs. (1/30 yr.) x = \$81.53 - \$91.53/yr. per operation <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of equipment costs necessary to restore site. Site restoration only necessary upon site closure, which staff estimates will occur once every 30 years.</i>	
Subtotal cost (to an In-vessel Digestion op. that would have been regulated as a Transfer/Processing op.)		<b>\$206.13 - \$839.13/yr.</b>
Personnel Health and Safety:	Make available IIPP: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x ¼ hr./yr. = \$3.89/yr. per operation <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to make IIPP available for review.</i>	
Roads:	Design and maintain roads: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x 150 hrs./yr. = \$4,672.50/yr. per operation \$2,000/operation \$317/yr. (10 year amortization)] \$4,672.50/yr. + \$317 = \$4,989.50/yr. per operation <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of labor hours and equipment costs.</i>	
Supervision and Personnel:	Provide contact information for operator and other responsible persons, in writing, to EA and operating record: \$35.88 + \$15.86 = \$51.74/hr. \$51.74/hr. x ½ hrs./yr. = \$25.87/yr. per operation <i>Average total hourly compensation (wages and benefits) of private management, professional, and related - US Bureau of Labor Statistics; staff estimate of time to provide written information to EA and place in operating record.</i>	
Subtotal cost (to an in-vessel digestion op. that would have been regulated as a Composting op.)		<b>\$5,019.26/yr.</b>
Total cost (to an In-vessel Digestion op. that would have been regulated as a Transfer/Processing op.)		<b>Any + TP = \$1,863.63 - \$2,496.63/yr.</b>
Total cost (to an in-vessel digestion op. that would have been regulated as a Composting op.)		<b>Any + CM = \$6,676.76/yr.</b>
<b>Medium Volume In-vessel Digestion Facilities (0 active)</b>		
Odor:	Prepare BMP Report: (\$5,000 - \$10,450)/facility (\$5,000 - \$10,450)/facilities x 0 facilities = \$0/yr. <i>Based on estimates obtained from industry consultants; staff estimates that no Medium Volume In-vessel Digestion Facilities will prepare a BMP report.</i>	
	Implement BMP Report: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x (80 hrs. - 160 hrs.)/yr. = (\$2,492 - \$4,984)/yr. per facility (\$2,492 - \$4,984)/yr. per facility x 0 facilities = \$0/yr. <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; staff estimates that no Medium Volume In-vessel Digestion Facilities will implement a BMP report.</i>	
Biogas Control:	Take precautions to minimize uncontrolled release: \$21.54/hr. + \$9.61/hr. = \$31.15/hr.	

	<p><math>\\$31.15/\text{hr.}/\text{hr.} \times 50 \text{ hrs./yr.} = \\$1,557.50/\text{yr.}</math> per facility  <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to take precautions to minimize uncontrolled release of biogas.</i></p>
Drainage and Spill Control:	<p>Spill response = \$100/yr. per facility  <i>Staff estimate of equipment and supplies costs.</i></p>
<b>Subtotal Cost (to any new In-vessel Digestion facility) \$1,657.50/yr.</b>	
Odor:	<p>Prepare OIMP: <math>\\$21.54/\text{hr.} + \\$9.61/\text{hr.} = \\$31.15/\text{hr.}</math>  <math>\\$31.15/\text{hr.} \times (4 \text{ hrs.} - 24 \text{ hrs.})/\text{yr.} = \\$124.60 - \\$747.60/\text{yr.}</math> per facility  <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to prepare OIMP.</i></p>
Site Restoration:	<p>Provide notice; cleaning, and removal: <math>\\$21.54/\text{hr.} + \\$9.61/\text{hr.} = \\$31.15/\text{hr.}</math>  <math>\\$31.15/\text{hr.} \times 40 \text{ hrs./yr.} = \\$1,246/\text{yr.}</math> per facility            Equipment use = <math>(\\$1,200 - \\$1,500)/\text{yr.}</math> per facility  <math>(\\$1,200 - \\$1,500) + \\$1,246 \times \text{one every } 30 \text{ yrs. } (1/30 \text{ yr.}) \times = \\$81.53 - \\$91.53/\text{yr.}</math> per facility  <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of equipment costs necessary to restore site. Site restoration only necessary upon site closure, which staff estimates will occur once every 30 years.</i></p>
<b>Subtotal cost (to an In-vessel Digestion fac that would have been regulated as a Transfer/Processing fac) \$206.13 - \$839.13/yr.</b>	
Personnel Health and Safety:	<p>Make available IIPP: <math>\\$21.54/\text{hr.} + \\$9.61/\text{hr.} = \\$31.15/\text{hr.}</math>  <math>\\$31.15/\text{hr.} \times \frac{1}{8} \text{ hr./yr.} = \\$3.89/\text{yr.}</math> per facility  <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to make IIPP available for review.</i></p>
Roads:	<p>Design and maintain roads: <math>\\$21.54/\text{hr.} + \\$9.61/\text{hr.} = \\$31.15/\text{hr.}</math>  <math>\\$31.15/\text{hr.} \times 200 \text{ hrs./yr.} = \\$6,230/\text{yr.}</math> per facility  <math>\\$3,000/\text{facility}</math> [\$476/yr. (10 year amortization)]  <math>\\$6,230/\text{yr.} + \\$476 = \\$6,706/\text{yr.}</math> per facility  <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of labor hours and equipment costs.</i></p>
Supervision and Personnel:	<p>Provide contact information for operator and other responsible persons, in writing, to EA and operating record: <math>\\$35.88 + \\$15.86 = \\$51.74/\text{hr.}</math>  <math>\\$51.74/\text{hr.} \times \frac{1}{2} \text{ hrs./yr.} = \\$25.87/\text{yr.}</math> per facility  <i>Average total hourly compensation (wages and benefits) of private management, professional, and related - US Bureau of Labor Statistics; staff estimate of time to provide written information to EA and place in operating record.</i></p>
Equipment:	<p>Provide equipment adequate in type, capacity, and number: \$500,000 [\$79,290/yr. (10 year amortization)] = \$79,290/yr. per facility  <i>Staff estimate based on stakeholder input.</i></p> <p>Sufficiently maintain equipment adequate in type, capacity, and number:  <math>\\$21.54/\text{hr.} + \\$9.61/\text{hr.} = \\$31.15/\text{hr.}</math>  <math>\\$31.15/\text{hr.} \times 300 \text{ hrs./yr.} = \\$9,345/\text{yr.}</math> per facility  <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics staff estimate of labor hours to maintain equipment.</i></p>
Housekeeping:	<p>Provide adequate housekeeping: <math>\\$21.54/\text{hr.} + \\$9.61/\text{hr.} = \\$31.15/\text{hr.}</math>  <math>\\$31.15/\text{hr.} \times 25 \text{ hrs./yr.} = \\$778.75/\text{yr.}</math> per facility  <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics staff estimate of labor hours to provide housekeeping.</i></p>
Lighting:	<p>Provide adequate lighting: <math>\\$5,000/\text{facility}</math> [\$793/yr. (10 year amortization)] x 0.5 facilities (needing artificial light) = \$400/yr. per facility  <i>Staff estimate of cost to provide artificial lighting; staff estimates 50% of the Medium Volume In-vessel Digestion Facilities will need artificial lighting.</i></p>
Visual Screening:	<p>Consult with EA: <math>\\$44.96/\text{hr.} + \\$24.84/\text{hr.} = \\$69.80/\text{hr.}</math>  <math>\\$69.80/\text{hr.} \times 2 \text{ hrs./yr.} = \\$139.60/\text{yr.}</math> per facility  <math>\\$139.60/\text{yr.}</math> per facility x 0.1 facilities (for which no local land use authority exists) = \$13.96/yr. per facility  <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of hours to consult with EA; staff estimates 10% of Medium Volume In-vessel Digestion Facilities will have no local land use authority.</i></p> <p>Provide aesthetics (e.g., fencing, berms, landscaping): <math>\\$10,000/\text{facility}</math> [\$1,586/yr. (10 year amortization)] x 0.1 facilities (for which no local land use authority exists) = \$160/yr. per facility  <i>Staff estimate of cost to provide aesthetics; staff estimates 10% of Medium Volume In-vessel Digestion Facilities will have no local land use authority.</i></p> <p>Maintain aesthetics: <math>\\$21.54/\text{hr.} + \\$9.61/\text{hr.} = \\$31.15/\text{hr.}</math>  <math>\\$31.15/\text{hr.} \times 50 \text{ hrs./yr.} = \\$1,557.50/\text{yr.}</math> per facility  <math>\\$1,557.50/\text{yr.}</math> per facility x 0.1 facilities (for which no local land use authority exists) = \$155.75/yr.  <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics staff estimate of hours to maintain aesthetics; staff estimates 10% of Medium Volume In-vessel Digestion Facilities will have no local land use authority.</i></p>
Water Supply:	<p>Provide a safe and adequate water supply for drinking = \$500/yr. per facility  <i>Staff estimate of cost to provide adequate drinking water.</i></p> <p>Provide a safe and adequate water supply emergency use: \$1,000/facility [\$159/yr. (10 year amortization)] = \$159/yr. per facility  <i>Staff estimate of cost to provide adequate emergency water.</i></p>
<b>Subtotal cost (to an in-vessel digestion fac. that would have been regulated as a Composting fac.) \$97,538.22/yr.</b>	
<b>Total cost (to an In-vessel Digestion fac. that would have been regulated as a Transfer/Processing fac.) Any + TP = \$1,863.63 - \$2,496.63/yr.</b>	
<b>Total cost (to an in-vessel digestion fac. that would have been regulated as a Composting fac.) Any + CM = \$99,195.72/yr.</b>	

<b>Large Volume In-vessel Digestion Facilities (0 active)</b>	
Odor:	Prepare BMP Report: (\$5,000 - \$10,450)/facility <i>Based on estimates obtained from industry consultants; staff estimates that one Large Volume In-vessel Digestion Facility will prepare a BMP report.</i>
	Implement BMP Report: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x (80 hrs. - 160 hrs.)/yr. = (\$2,492 - \$4,984)/yr. per facility <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; staff estimates that one Large Volume In-vessel Digestion Facility will implement a BMP report.</i>
Biogas Control:	Take precautions to minimize uncontrolled release: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr./hr. x 50 hrs./yr. = \$1,557.50/yr. per facility <i>Average total hourly compensation (wages and benefits) of civilian workers - US Bureau of Labor Statistics; staff estimate of time to take precautions to minimize uncontrolled release of biogas.</i>
Drainage and Spill Control:	Spill response = \$100/yr. per facility <i>Staff estimate of equipment and supplies costs.</i>
0.1% Physical Contaminants:	Sampling and analysis: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x ½ hr. = \$10.38 \$10.38 + \$48.00 lab cost = \$58.38/sample 26,000 – 130,000 tons x 0.5 facilities x 2 yd <sup>3</sup> /ton x 0.6 (volume reduction) x 1 sample/5,000 yd <sup>3</sup> = (2 - 10) samples \$58.38/sample x (3 – 16) samples/yr. = \$160.14 - \$854.08/yr. per facility <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to collect samples; current laboratory pricing; range of tonnage based on an estimate of 100 to 500 tons per day over 260 operating days per year; 0.5 of the Large Volume In-Vessel Facilities will compost themselves; in-vessel digestion will reduce feedstock volume by 40%.</i>
	Removing contaminants: (\$0 - \$11)/ton x 26,000 – 130,000 tons/yr. = \$0 - \$1,430,000/yr. per facility <i>Based on estimates from industry; some operations/facilities are already meeting this standard, some will need to hire additional labor and/or purchase additional equipment to meet the standard; tonnage based on estimated throughput.</i>
<b>Subtotal Cost (to any new In-vessel Digestion facility)</b>	
<b>\$9,309.26 – \$1,447,945.58/yr.</b>	
Odor:	Prepare OIMP: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x (4 hrs. - 24 hrs.)/yr. = \$124.60 - \$747.60/yr. per facility <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to prepare OIMP.</i>
Site Restoration:	Provide notice; cleaning, and removal: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x 40 hrs./yr. = \$1,246/yr. per facility Equipment use = (\$1,200 - \$1,500)/yr. per facility (\$1,200 - \$1,500) + \$1,246 x one every 30 yrs. (1/30 yr.) x = \$81.53 - \$91.53/yr. per facility <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of equipment costs necessary to restore site. Site restoration only necessary upon site closure, which staff estimates will occur once every 30 years.</i>
<b>Subtotal cost (to an In-vessel Digestion fac that would have been regulated as a Transfer/Processing fac)</b>	
<b>\$206.13 - \$839.13/yr.</b>	
Personnel Health and Safety:	Make available IIPP: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x ¼ hr./yr. = \$3.89/yr. per facility <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of time to make IIPP available for review.</i>
Roads:	Design and maintain roads: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x 260 hrs./yr. = \$8,099/yr. per facility \$4,000/facility [\$634/yr. (10 year amortization)] \$8,099/yr. + \$634/yr. = \$8,733/yr. facility <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of labor hours and equipment costs.</i>
Supervision and Personnel:	Provide contact information for operator and other responsible persons, in writing, to EA and operating record: \$35.88 + \$15.86 = \$51.74/hr. \$51.74/hr. x ½ hrs./yr. = \$25.87/yr. per facility <i>Average total hourly compensation (wages and benefits) of private management, professional, and related - US Bureau of Labor Statistics; staff estimate of time to provide written information to EA and place in operating record.</i>
Equipment:	Provide equipment adequate in type, capacity, and number: \$500,000 [\$79,290/yr. (10 year amortization)] = \$79,290/yr. per facility <i>Staff estimate based on stakeholder input.</i>
	Sufficiently maintain equipment adequate in type, capacity, and number: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x 400 hrs./yr. = \$12,460/yr. per facility <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics staff estimate of labor hours to maintain equipment.</i>
Housekeeping:	Provide adequate housekeeping: \$21.54/hr. + \$9.61/hr. = \$31.15/hr. \$31.15/hr. x 25 hrs./yr. = \$778.75/yr. per facility <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics staff estimate of labor hours to provide housekeeping.</i>
Lighting:	Provide adequate lighting: \$5,000/facility [\$793/yr. (10 year amortization)] x 0.5 facilities (needing artificial light) for which no local land use requirement exists) = \$400/yr. per facility <i>Staff estimate of cost to provide artificial lighting; staff estimates 50% of the Large Volume In-vessel Digestion Facilities will need artificial lighting.</i>
Visual Screening:	Consult with EA: \$44.96/hr. + \$24.84/hr. = \$69.80/hr. \$69.80/hr. x 2 hrs./yr. = \$139.60/yr. per facility

	<p>\$139.60/yr. per facility x 0.1 facilities (for which no local land use authority exists) = \$13.96/yr. per facility  <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics; staff estimate of hours to consult with EA; staff estimates 10% of Large Volume In-vessel Digestion Facilities will have no local land use authority.</i></p> <p>Provide aesthetics (e.g., fencing, berms, landscaping): \$10,000/facility [\$1,586/yr. (10 year amortization)] x 0.1 facilities (for which no local land use authority exists) = \$160/yr. per facility  <i>Staff estimate of cost to provide aesthetics; staff estimates 10% of Large Volume In-vessel Digestion Facilities will have no local land use authority.</i></p> <p>Maintain aesthetics: \$21.54/hr. + \$9.61/hr. = \$31.15/hr.                  \$31.15/hr. x 50 hrs./yr. = \$1,557.50/yr. per facility                  \$1,557.50/yr. per facility x 0.1 facilities (for which no local land use authority exists) = \$155.75/yr.  <i>Average total hourly compensation (wages and benefits) of civilian worker - US Bureau of Labor Statistics staff estimate of hours to maintain aesthetics; staff estimates 10% of Large Volume In-vessel Digestion Facilities will have no local land use authority.</i></p>	
Water Supply:	<p>Provide a safe and adequate water supply for drinking: = \$500/yr. per facility  <i>Staff estimate of cost to provide adequate drinking water.</i></p> <p>Provide a safe and adequate water supply emergency use: \$1,000/facility [\$159/yr. (10 year amortization)] = \$159/yr. per facility  <i>Staff estimate of cost to provide adequate emergency water.</i></p>	
Subtotal cost (to an in-vessel digestion fac. that would have been regulated as a Composting fac.)		<b>\$102,680.22/yr.</b>
Total cost (to an In-vessel Digestion fac. that would have been regulated as a Transfer/Processing fac.)		<b>Any + TP = \$9,515.19 - \$1,448,784.71/yr.</b>
Total cost (to an in-vessel digestion fac. that would have been regulated as a Composting fac.)		<b>Any + CM = \$111,989.28 - \$1,550,625.80/yr.</b>

	Yr. 1 - 2	Yr. 3	Total #	Total Cost
Research In-vessel Digestion Operations	4	2	6	3 x [\$2,070.59 - \$2,703.59]/yr. = [\$6,211.77 - \$8,110.77]/yr. 3 x \$3,610.36/yr. = \$10,831.08/yr. [\$6,211.77 - \$8,110.77]/yr. + \$10,831.08/yr. = \$17,042.85 - \$18,941.85/yr.
Dairy In-vessel Digestion Operations	1	2	3	1 x [\$1,863.63 - \$2,496.63]/yr. = [\$1,863.63 - \$2,496.63]/yr. 2 x \$4,961.00/yr. = \$9,922.00/yr. [\$1,863.63 - \$2,496.63]/yr. + \$9,922.00/yr. = \$11,785.63 - \$12,418.63/yr.
Distribution Center In-vessel Digestion Operations				
Limited Volume In-vessel Digestion Operations		2	2	1 x [\$1,863.63 - \$2,496.63]/yr. = [\$1,863.63 - \$2,496.63]/yr. 1 x \$6,676.76/yr. = \$6,676.76/yr. [\$1,863.63 - \$2,496.63]/yr. + \$6,676.76/yr. = \$8,540.39 - \$9,173.39/yr.
Medium Volume In-vessel Digestion Facilities		2	2	1 x [\$1,863.63 - \$2,496.63]/yr. = [\$1,863.63 - \$2,496.63]/yr. 1 x \$99,195.72/yr. = \$99,195.72/yr. [\$1,863.63 - \$2,496.63] + \$99,195.72/yr. = \$101,059.35 - \$101,692.35/yr.
Large Volume In-vessel Digestion Facilities		2	2	1 x [\$9,515.19 - \$1,448,784.71]/yr. = [\$9,515.19 - \$1,448,784.71]/yr. 1 x [\$111,989.28 - \$1,550,625.80]/yr. = [\$111,989.28 - \$1,550,625.80]/yr. [\$9,515.19 - \$1,448,784.71]/yr. + [\$111,989.28 - \$1,550,625.80]/yr. = \$121,504.47 - \$2,999,410.51/yr.
				<b>\$259,932.69 - \$3,141,636.73/yr.</b>

**Public Compostable Material Handling Operations and Facilities**  
**Preliminary Estimates**

<b>Agricultural Material Composting Operations (0 active)</b>	
Odor:	Prepare BMP Report: \$5,000 - \$10,450/operation x 0 active operations/yr. = \$0/yr. <i>Based on estimates obtained from industry consultants; only facilities accepting mixed material are likely to prepare a BMP report.</i>
	Implement BMP Report: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x (80 – 160 hrs.)/yr. = \$3,400.80 - \$6,801.60/yr. per operation \$3,400.80 - \$6,801.60/yr. per operation x 0 active operations = \$0/yr. <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; only facilities accepting mixed material are likely to implement a BMP report.</i>
1.0% Physical Contaminants: (incoming)	Visual observation of loads: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x (1/2 to 1/2 hr.) x 260 operating days/yr. = \$3,684.20 - \$5,526.30/yr. per operation \$3,684.20 - \$5,526.30/yr. per operation x 0 active operations = \$0/yr. <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to visually observe loads; zero existing public agricultural material composting operations.</i>
0.1% Physical Contaminants: (outgoing)	Sampling and analysis: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 1/2 hr. = \$14.17 \$14.17 + \$48.00 lab cost = \$62.17/sample \$62.17/sample x 0 samples/yr. = \$0/yr. <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to collect samples; current laboratory pricing; zero existing public agricultural material composting operations.</i>
	Removing contaminants: (\$0 - \$11)/ton x 0 tons/yr. x 0 active operations = \$0/yr. <i>Based on estimates from industry: some operations/facilities are already meeting this standard, some will need to hire additional labor and/or purchase additional equipment to meet the standard. Zero existing public agricultural material composting operations.</i>
<b>Subtotal Cost</b>	
<b>\$0/yr.</b>	
<b>Biosolids Composting Operations at POTWs (8 active)</b>	
Odor:	Prepare BMP Report: \$5,000 - \$10,450/operation x 0 operations/yr. = \$0/yr. <i>Based on estimates obtained from industry consultants; only facilities accepting mixed material are likely to prepare a BMP report.</i>
	Implement BMP Report: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x (80 – 160 hrs.)/yr. = \$3,400.80 - \$6,801.60/yr. per operation \$3,400.80 - \$6,801.60/yr. per operation x 0 operations = \$0/yr. <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of how long it would take to implement activities required in the BMP report; only facilities accepting mixed material are likely to implement a BMP report.</i>
1.0% Physical Contaminants: (incoming)	Visual observation of loads: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x (1/2 to 1/2 hr.) x 260 operating days/yr. = \$3,684.20 - \$5,526.30/yr. per operation \$3,684.20 - \$5,526.30/yr. per operation x 1 operation = \$3,684.20 - \$5,526.30/yr. <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to visually observe loads; staff estimate that one of the eight active Biosolids Composting Operations at POTWs accepts green material. This standard only applies to operations and facilities accepting green material.</i>
0.1% Physical Contaminants: (outgoing)	Sampling and analysis: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 1/2 hr. = \$14.17 \$14.17 + \$48.00 lab cost = \$62.17/sample \$62.17/sample x 1 sample/yr. x = \$62.17/yr. <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to collect samples; current laboratory pricing; staff estimates that EA will require 10% of biosolids composting operations to sample outgoing material.</i>
	Removing contaminants: (\$0 - \$11)/ton x 5,363 tons of avg. operation/yr. x 1 operation = \$0 to \$58,993 <i>Based on estimates from industry: some operations/facilities are already meeting this standard, some will need to hire additional labor and/or purchase additional equipment to meet the standard; biosolids operations can only accept green material with less than 1% physical contamination, and most biosolids operations should meet the 0.1% physical contaminant limit for finished compost.</i>
<b>Subtotal Cost</b>	
<b>\$3,746 - \$64,581/yr.</b>	
<b>Research Composting Operations (4 active)</b>	
Odor:	Prepare BMP Report: \$5,000 - \$10,450/operation x 0 operations/yr. = \$0/yr. <i>Based on estimates obtained from industry consultants; only facilities accepting mixed material are likely to prepare a BMP report.</i>
	Implement BMP Report: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x (80 – 160 hrs.)/yr. = \$3,400.80 - \$6,801.60/yr. per operation \$3,400.80 - \$6,801.60/yr. per operation x 0 operations = \$0/yr. <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of how long it would take to implement activities required in the BMP report; only facilities accepting mixed material are likely to implement a BMP report.</i>
2-Year Report:	Prepare 2-yr. Report: \$34.71/hr. + 17.05/hr. = \$51.76/hr. \$51.76/hr. x 8 hrs./yr. = \$414.08/yr. per operation \$414.08/yr. per operation x 2 operation/yr. = \$828.16/yr. <i>Average total hourly compensation (wages and benefits) of management, professional, and related - US Bureau of Labor Statistics; staff estimate on how long to prepare report; staff estimates 50% of research operations will submit report to extend research operations.</i>
<b>Subtotal Cost</b>	
<b>\$828.16/yr.</b>	

<b>Green Material Composting Operations (10 active)</b>	
12,500 Cubic Yard Storage:	Cost for submitting request in writing for SSA: $\$34.71 + 17.05 = \$51.76/\text{hr.}$ $\$51.76/\text{hr.} \times (1 - 2 \text{ hrs.})/\text{yr. per operation} \times 1 \text{ operation} = \$51.76 - \$103.52/\text{yr.}$ <i>Average total hourly compensation (wages and benefits) of management, professional, and related - US Bureau of Labor Statistics; staff estimate on time to complete request submittal; staff estimates 10% of operations will submit SSA request.</i>
Odor:	Prepare BMP Report: $\$5,000 - \$10,450/\text{operation} \times 0 \text{ operations}/\text{yr.} = \$0/\text{yr.}$ <i>Based on estimates obtained from industry consultants; only facilities accepting mixed material are likely to prepare a BMP report.</i>
	Implement BMP Report: $\$27.38/\text{hr.} + \$15.13/\text{hr.} = \$42.51/\text{hr.}$ $\$42.51/\text{hr.} \times (80 - 160 \text{ hrs.})/\text{yr.} = \$3,400.80 - \$6,801.60/\text{yr. per operation}$ $\$3,400.80 - \$6,801.60/\text{yr. per operation} \times 0 \text{ operations} = \$0/\text{yr.}$ <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of how long it would take to implement activities required in the BMP report; only facilities accepting mixed material are likely to implement a BMP report.</i>
1.0% Physical Contaminants: (incoming)	Visual observation of loads: $\$27.38/\text{hr.} + \$15.13/\text{hr.} = \$42.51/\text{hr.}$ $\$42.51/\text{hr.} \times (\frac{1}{2} \text{ to } \frac{1}{2} \text{ hr.}) \times 260 \text{ operating days}/\text{yr.} = \$3,684.20 - \$5,526.30/\text{yr. per operation}$ $\$3,684.20 - \$5,526.30/\text{yr. per operation} \times 10 \text{ operations} = \$36,842 - \$55,263/\text{yr.}$ <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistic; staff estimate of time to visually observe loads; all green material composting operations must visually sample loads.</i>
0.1% Physical Contaminants: (outgoing)	Sampling and analysis: $\$27.38/\text{hr.} + \$15.13/\text{hr.} = \$42.51/\text{hr.}$ $\$42.51/\text{hr.} \times \frac{1}{2} \text{ hr.} = \$14.17$ $\$14.17 + \$48.00 \text{ lab cost} = \$62.17/\text{sample}$ $\$62.17/\text{sample} \times 1 \text{ sample}/\text{yr.} = \$62.17/\text{yr.}$ <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to collect samples; current laboratory pricing; staff estimates that EA will request a sample from 10% of operators(1).</i>
	Removing contaminants: $(\$0 - \$11)/\text{ton} \times 3,654 \text{ tons of avg. operation}/\text{yr.} \times 1 \text{ operation} = \$0 \text{ to } \$40,194$ <i>Based on estimates from industry: some operations/facilities are already meeting this standard, some will need to hire additional labor and/or purchase additional equipment to meet the standard; green material composting operations can only accept green material with less than 1% physical contamination, and most green material composting operations should meet the 0.1% physical contaminant limit for finished compost; tonnage based on current estimated throughput.</i>
<b>Subtotal Cost</b>	
<b>\$36,955.93 - \$95,622.69/yr.</b>	
<b>Green Material Composting Facilities (8 active)</b>	
Odor:	Prepare BMP Report: $\$5,000 - \$10,450/\text{facility} \times 0 \text{ facilities}/\text{yr.} = \$0/\text{yr.}$ <i>Based on estimates obtained from industry consultants; only facilities accepting mixed material are likely to prepare a BMP report.</i>
	Implement BMP Report: $\$27.38/\text{hr.} + \$15.13/\text{hr.} = \$42.51/\text{hr.}$ $\$42.51/\text{hr.} \times (80 - 160 \text{ hrs.})/\text{yr.} = \$3,400.80 - \$6,801.60/\text{yr. per facility}$ $\$3,400.80 - \$6,801.60/\text{yr. per facility} \times 0 \text{ facilities} = \$0/\text{yr.}$ <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of how long it would take to implement activities required in the BMP report; only facilities accepting mixed material are likely to implement a BMP report.</i>
1.0% Physical Contaminants: (incoming)	Visual observation of loads: $\$27.38/\text{hr.} + \$15.13/\text{hr.} = \$42.51/\text{hr.}$ $\$42.51/\text{hr.} \times (\frac{1}{2} \text{ to } \frac{1}{2} \text{ hr.}) \times 260 \text{ operating days}/\text{yr.} = \$3,684.20 - \$5,526.30/\text{yr. per facility}$ $\$3,684.20 - \$5,526.30/\text{yr. per facility} \times 8 \text{ facilities} = \$29,474 - \$44,210/\text{yr.}$ <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistic; staff estimate of time to visually observe loads; all green material composting operations must visually sample loads; all green material composting facilities operations must visually sample loads.</i>
0.1% Physical Contaminants: (outgoing)	Sampling and analysis: $\$27.38/\text{hr.} + \$15.13/\text{hr.} = \$42.51/\text{hr.}$ $\$42.51/\text{hr.} \times \frac{1}{2} \text{ hr.} = \$14.17$ $\$14.17 + \$48.00 \text{ lab cost} = \$62.17/\text{sample}$ $\$62.17/\text{sample} \times 135 \text{ of samples}/\text{yr.} = \$8,393/\text{yr.}$ <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to collect samples; current laboratory pricing; number of samples is based on current estimated throughput being sample every 5,000 cubic yards.</i>
	Removing contaminants: $(\$0 - \$11)/\text{ton} \times 48,215 \text{ tons of avg. facility}/\text{yr.} \times 1 \text{ facility} = \$0 \text{ to } \$530,365$ <i>Based on estimates from industry: some operations/facilities are already meeting this standard, some will need to hire additional labor and/or purchase additional equipment to meet the standard; green material composting facilities can only accept green material with less than 1% physical contamination, and most green material composting operations should meet the 0.1% physical contaminant limit for finished compost.; tonnage based on current estimated throughput.</i>
<b>Subtotal Cost</b>	
<b>\$37,867 - \$582,968/yr.</b>	
<b>Vegetative Food Material Composting Operations (<math>\leq 12,500</math> cubic yards) (0 active)</b>	
Odor:	Prepare BMP Report: $\$5,000 - \$10,450/\text{operation} \times 0 \text{ active operations}/\text{yr.} = \$0/\text{yr.}$ <i>Based on estimates obtained from industry consultants; only facilities accepting mixed material are likely to prepare a BMP report.</i>
	Implement BMP Report: $\$27.38/\text{hr.} + \$15.13/\text{hr.} = \$42.51/\text{hr.}$ $\$42.51/\text{hr.} \times (80 - 160 \text{ hrs.})/\text{yr.} = \$3,400.80 - \$6,801.60/\text{yr. per operation}$ $\$3,400.80 - \$6,801.60/\text{yr. per operation} \times 0 \text{ active operations} = \$0/\text{yr.}$ <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; zero existing public Vegetative Food Material Composting Facilities.</i>
1.0% Physical Contaminants: (incoming)	Visual observation of loads: $\$27.38/\text{hr.} + \$15.13/\text{hr.} = \$42.51/\text{hr.}$ $\$42.51/\text{hr.} \times (\frac{1}{2} \text{ to } \frac{1}{2} \text{ hr.}) \times 260 \text{ operating days}/\text{yr.} = \$3,684.20 - \$5,526.30/\text{yr. per operation}$ $\$3,684.20 - \$5,526.30/\text{yr. per operation} \times 0 \text{ active operations} = \$0/\text{yr.}$ <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to visually observe loads; zero existing public Vegetative Food Material Composting Facilities.</i>

0.1% Physical Contaminants: (outgoing)	<p>Sampling and analysis: \$27.38/hr. + \$15.13/hr. = \$42.51/hr.                      \$42.51/hr. x ½ hr. = \$14.17                      \$14.17 + \$48.00 lab cost = \$62.17/sample                      \$62.17/sample x 0 samples/yr. = \$0/yr.  <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to collect samples; current laboratory pricing; zero existing public Vegetative Food Material Composting Facilities.</i></p> <p>Removing contaminants: (\$0 - \$11)/ton x tons/yr. x 0 active operations = \$0/yr.  <i>Based on estimates from industry: some operations/facilities are already meeting this standard, some will need to hire additional labor and/or purchase additional equipment to meet the standard. Zero existing public Vegetative Food Material Composting Facilities.</i></p>	
<b>Subtotal Cost</b>		<b>\$0/yr.</b>
<b>Vegetative Food Material Composting Facilities (&gt; 12,500 cubic yards) (0 active)</b>		
Odor:	<p>Prepare BMP Report: \$5,000 - \$10,450/operation x 0 active facilities/yr. = \$0/yr.  <i>Based on estimates obtained from industry consultants; only facilities accepting mixed material are likely to prepare a BMP report.</i></p> <p>Implement BMP Report: \$27.38/hr. + \$15.13/hr. = \$42.51/hr.                      \$42.51/hr. x (80 – 160 hrs.)/yr. = \$3,400.80 - \$6,801.60/yr. per facility                      \$3,400.80 - \$6,801.60/yr. per facility x 0 active facilities = \$0/yr.  <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; zero existing public Vegetative Food Material Composting Facilities.</i></p>	
1.0% Physical Contaminants: (incoming)	<p>Visual observation of loads: \$27.38/hr. + \$15.13/hr. = \$42.51/hr.                      \$42.51/hr. x (½ to ½ hr.) x 260 operating days/yr. = \$3,684.20 - \$5,526.30/yr. per facility                      \$3,684.20 - \$5,526.30/yr. per facility x 0 active facilities = \$0/yr.  <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to visually observe loads; zero existing public Vegetative Food Material Composting Facilities.</i></p>	
0.1% Physical Contaminants: (outgoing)	<p>Sampling and analysis: \$27.38/hr. + \$15.13/hr. = \$42.51/hr.                      \$42.51/hr. x ½ hr. = \$14.17                      \$14.17 + \$48.00 lab cost = \$62.17/sample                      \$62.17/sample x 0 samples/yr. = \$0/yr.  <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to collect samples; current laboratory pricing; zero existing public Vegetative Food Material Composting Facilities.</i></p> <p>Removing contaminants: (\$0 - \$11)/ton x tons/yr. x 0 active facilities = \$0/yr.  <i>Based on estimates from industry: some operations/facilities are already meeting this standard, some will need to hire additional labor and/or purchase additional equipment to meet the standard. Zero existing public Vegetative Food Material Composting Facilities.</i></p>	
<b>Subtotal Cost</b>		<b>\$0/yr.</b>
<b>Composting Facilities (all) (e.g., biosolids, digestate, food material, mixed) (5 active)</b>		
Odor:	<p>Prepare BMP Report: \$5,000 - \$10,450 x 1 facility/yr. = \$5,000 - \$10,450/yr.  <i>Based on estimates obtained from industry consultants; based on odor violation data from the Solid Waste Information System database, staff estimates one compost facility will implement the BMP report.</i></p> <p>Implement BMP Report: \$27.38/hr. + \$15.13/hr. = \$42.51/hr.                      \$42.51/hr. x (80 – 160 hrs.)/yr. = \$3,400.80 - \$6,801.60/yr. per facility                      \$3,400.80 - \$6,801.60/yr. per facility x 1 facility = \$3,400.80 - \$6,801.60/yr.  <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; based on odor violation data from the Solid Waste Information System database, staff estimates one compost facility will implement the BMP report.</i></p>	
0.1% Physical Contaminants: (outgoing)	<p>Sampling and analysis: \$27.38/hr. + \$15.13/hr. = \$42.51/hr.                      \$42.51 x ½ hr. = \$14.17                      \$14.17 + \$48.00 lab cost = \$62.17/sample                      \$62.17/sample x 98 samples/yr. x = \$6,092.66/yr.  <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to collect samples; current laboratory pricing; number of samples is based on current estimated throughput being sample every 5,000 cubic yards.</i></p> <p>Removing contaminants: \$0-\$11/ton x 246,124 tons/yr. = \$0 - \$2,707,364/yr.  <i>Based on estimates from industry: some operations/facilities are already meeting this standard, some will need to hire additional labor and/or purchase additional equipment to meet the standard; tonnage based on current estimated throughput.</i></p>	
<b>Subtotal Cost</b>		<b>\$14,493 - \$2,730,708/yr.</b>
<b>Chipping and Grinding Operations (≤ 200 tons/day) (5 active)</b>		
Odor:	<p>Prepare BMP Report: \$5,000 - \$10,450/operation x 0 operations/yr. = \$0/yr.  <i>Based on estimates obtained from industry consultants; only facilities accepting mixed material are likely to prepare a BMP report</i></p> <p>Implement BMP Report: \$27.38/hr. + \$15.13/hr. = \$42.51/hr.                      \$42.51/hr. x (80 – 160 hrs.)/yr. = \$3,400.80 - \$6,801.60/yr. per operation                      \$3,400.80 - \$6,801.60/yr. per operation x 0 operations = \$0/yr.  <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; only facilities accepting mixed material are likely to implement a BMP report.</i></p>	
1.0% Physical Contaminants: (incoming)	<p>Visual observation of loads: \$27.38/hr. + \$15.13/hr. = \$42.51/hr.                      \$42.51/hr. x (½ to ½ hr.) x 260 operating days/yr. = \$3,684.20 - \$5,526.30/yr. per operation                      \$3,684.20 - \$5,526.30/yr. per operation x 5 operations = \$18,421 - \$27,631.50/yr.  <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; all chip and grind operations must visually sample loads.</i></p>	
<b>Subtotal Cost</b>		<b>\$18,421 - \$27,631.50/yr.</b>
<b>Chipping and Grinding Facilities (&gt; 200 and ≤ 500 tons/day) (1 active)</b>		
Odor:	<p>Prepare BMP Report: \$5,000 - \$10,450/operation x 0 facilities/yr. = \$0/yr.  <i>Based on estimates obtained from industry consultants; only facilities accepting mixed material are likely to prepare a BMP report.</i></p>	

	<p>Implement BMP Report: \$27.38/hr. + \$15.13/hr. = \$42.51/hr.  \$42.51/hr. x (80 – 160 hrs.)/yr. = \$3,400.80 - \$6,801.60/yr. per facility  \$3,400.80 - \$6,801.60/yr. per facility x 0 facilities = \$0/yr.  <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; only facilities accepting mixed material are likely to implement a BMP report.</i></p>
1.0% Physical Contaminants: (incoming)	<p>Visual observation of loads: \$27.38/hr. + \$15.13/hr. = \$42.51/hr.  \$42.51/hr. x (½ to ½ hr.) x 260 operating days/yr. = \$3,684.20 - \$5,526.30/yr. per facility  \$3,684.20 - \$5,526.30/yr. per facility x 1 facility/yr. = \$3,684.20 - \$5,526.30/yr.  <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; all chip and grind facilities must visually sample loads.</i></p>
<b>Subtotal Cost</b>	
<b>\$3,684.20 - \$5,526.30/yr.</b>	
<b>Chipping and Grinding Facilities (&gt; 500 tons/day) (10 active)</b>	
Odor:	<p>Prepare BMP Report: \$5,000 - \$10,450/facility x 0 facilities/yr. = \$0/yr.  <i>Based on estimates obtained from industry consultants; only facilities accepting mixed material are likely to prepare a BMP report.</i></p> <p>Implement BMP Report: \$27.38/hr. + \$15.13/hr. = \$42.51/hr.  \$42.51/hr. x (80 – 160 hrs.)/yr. = \$3,400.80 - \$6,801.60/yr. per facility  \$3,400.80 - \$6,801.60/yr. per facility x 0 facilities = \$0/yr.  <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; only facilities accepting mixed material are likely to implement a BMP report.</i></p>
1.0% Physical Contaminants: (incoming)	<p>Visual observation of loads: \$27.38/hr. + \$15.13/hr. = \$42.51/hr.  \$42.51/hr. x (½ to ½ hr.) x 260 operating days/yr. = \$3,684.20 - \$5,526.30/yr. per facility  \$3,684.20 - \$5,526.30/yr. per facility x 10 facilities/yr. = \$36,842 - \$55,263/yr.  <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; all chip and grind facilities must visually sample loads.</i></p>
<b>Subtotal Cost</b>	
<b>\$36,842 - \$55,263/yr.</b>	
<b>Enforcement Agencies</b>	
Land Application:	<p>Request verification of compliance: \$54.75/hr. + \$30.25/hr. = \$85.00/hr.  \$85.00/hr. x 1 hr./request x 20 requests/yr. = \$1,700/yr.  <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the number of requests received and the amount of time spent on each request.</i></p> <p>Approve alternative frequencies and depths: \$54.75/hr. + \$30.25/hr. = \$85.00/hr.  \$85.00/hr. x 1 hr./approval x 20 approvals/yr. = \$1,700/yr.  <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the number of approvals for alternative depths and frequencies.</i></p>
12,500 Cubic Yard Storage:	<p>Grant Seasonal Storage Adjustment: \$54.75/hr. + \$30.25/hr. = \$85.00/hr.  \$85.00/hr. x 1 hr./request x 7 adjustments/yr. = \$595/yr.  <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the number of requests received and the amount of time spent on each request.</i></p>
Odor:	<p>Review &amp; approve BMP Report: \$54.75/hr. + \$30.25/hr. = \$85.00/hr.  \$85.00/hr. x 4 hrs./report x 1 report/yr. = \$340/yr.  <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the number of BMP reports received and the amount of time spent on each request.</i></p> <p>Direct operator to implement/change BMP Report: \$54.75/hr. + \$30.25/hr. = \$85.00/hr.  \$85.00/hr. x 1 hr./report x 1 reports/yr. = \$85/yr.  <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the number of BMP reports implemented/changed and the amount of time spent on each request.</i></p>
1.0% Physical Contaminants: (incoming)	<p>Notification the operation no longer qualifies for EA Notification tier: \$54.75/hr. + \$30.25/hr. = \$85.00/hr.  \$85.00/hr. x ½ hr./notification x 2 notifications/yr. = \$85/yr.  <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the number of operations that no longer qualify for EA Notification Tier and the amount of time spent on each notification.</i></p> <p>Issue Cease &amp; Desist Order: \$54.75/hr. + \$30.25/hr. = \$85.00/hr.  \$85.00/hr. x 4 hrs./order x 1 order/yr. = \$340/yr.  <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the number of operations receive a Cease &amp; Desist Order and the amount of time spent on each Cease &amp; Desist Order.</i></p> <p>Verifying percent physical contaminants: \$54.75/hr. + \$30.25/hr. = \$85.00/hr.  \$85.00/hr. x 1 hr./verification x 4 verifications/yr. = \$340/yr.  <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the number verifications and the amount of time spent on each verification.</i></p>
0.1% Physical Contaminants: (outgoing)	<p>Direct operations to sample: \$54.75/hr. + \$30.25/hr. = \$85.00/hr.  \$85.00/hr. x ½ hr./direction x 4 directions/yr. = \$170/yr.  <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the number operations that will be directed to sample for physical contaminants and the amount of time spent providing directions to operators.</i></p> <p>Review lab results: \$54.75/hr. + \$30.25/hr. = \$85.00/hr.  \$85.00/hr. x ¼ hr./review x 1,288 reviews (98 public mixed + 1186 private mixed + 4 green material operations + (10% of application sites))/yr. = \$13,685/yr.  <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the number of lab samples will be reviewed and the amount of time spent reviewing each lab sample.</i></p>

Research:	Review 2-yr. report: \$54.75/hr. + \$30.25/hr. = \$85.00/hr. \$85.00/hr. x 2 hrs./report x 4 reports/yr. = \$680/yr. <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the number of Research reports received and the amount of time spent reviewing each report.</i>
	Approve extension: \$54.75/hr. + \$30.25/hr. = \$85.00/hr. \$85.00/hr. x 2 hrs./extension x 2 extensions/yr. = \$340/yr. <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the number of Research extensions received and the amount of time spent reviewing each extension.</i>
Alt. Sampling and Analysis:	Review and approve/deny request for alternative sampling or analysis: \$54.75/hr. + \$30.25/hr. = \$85.00/hr. \$85.00/hr. x 4 hrs./request x 20 requests/yr. = \$6,800/yr. <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the number of alternative sampling requests received and the amount of time spent reviewing and approving/denying each request.</i>
<b>Subtotal Cost</b>	
<b>\$26,860/yr.</b>	
<b>California Department of Food and Agriculture</b>	
Prohibition Exceptions:	Consultation with SWRCB and CalRecycle: \$54.75/hr. + \$30.25/hr. = \$85.00/hr. \$85.00/hr. x ½ hr./consult x 2 consults/yr. = \$85/yr. <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the number of consultations and the amount of time spent on each consultation.</i>
Agronomically Beneficial:	Determination of "agronomically beneficial": \$54.75/hr. + \$30.25/hr. = \$85.00/hr. \$85.00/hr. x ½ hr./determination x 10 determinations/yr. = \$425/yr. <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the number of determinations and the amount of time spent on each determination.</i>
<b>Subtotal Cost</b>	
<b>\$510/yr.</b>	
<b>State Water Resources Control Board</b>	
Prohibition Exceptions:	Consultation with CDFA and CalRecycle: \$54.75/hr. + \$30.25/hr. = \$85.00/hr. \$85.00/hr. x ½ hr./consultations x 2 consults/yr. = \$85/yr. <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the number of consultations and the amount of time spent on each consultation.</i>
<b>Subtotal Cost</b>	
<b>\$85/yr.</b>	
<b>Regional Water Quality Control Board</b>	
Alt. Land Application Alternatives:	Consultation with Enforcement Agencies: \$54.75/hr. + \$30.25/hr. = \$85.00/hr. \$85.00/hr. x ½ hr./consult x 20 consultations (10% of application sites) = \$/yr. <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the number of consultations and the amount of time spent on each consultation.</i>
<b>Subtotal Cost</b>	
<b>\$850/yr.</b>	
<b>CalRecycle</b>	
Prohibition Exceptions:	Approve exceptions to mammalian tissue prohibition: \$54.75/hr. + \$30.25/hr. = \$85.00/hr. \$85.00/hr. x 16 hrs./yr. = \$1,360/yr. <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the number of approvals and the amount of time spent on each approval.</i>
Odor:	Consultation with Enforcement Agencies: \$54.75/hr. + \$30.25/hr. = \$85.00/hr. \$85.00/hr. x 24 hrs./yr. = \$2,040/yr. <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the number of hours spent consulting with Enforcement Agencies.</i>
EA Notification Inspection Frequency:	Concur on reduced frequency: \$54.75/hr. + \$30.25/hr. = \$85.00/hr. \$85.00/hr. x ½ hr./concurrence x 20 requests/yr. = \$850/yr. <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the number of reduced inspection frequency requests and amount of time spent on each concurrence.</i>
<b>Subtotal Cost</b>	
<b>\$4,250/yr.</b>	
<b>Total Cost</b>	
<b>\$185,392 - \$3,595,684/yr.</b>	

**Public In-vessel Digestion Operations and Facilities**  
*Preliminary Estimates*

<b>Research In-vessel Digestion Operations (0 active)</b>	
2-Year Report:	Prepare 2-yr. Report: \$34.71/hr. + 17.05/hr. = \$51.76/hr. \$51.76/hr. x 8 hrs. ÷ 2 years = \$207.04/yr. per operation <i>Average total hourly compensation (wages and benefits) of management, professional, and related - US Bureau of Labor Statistics; staff estimate of time to prepare report; reports are due after two years.</i>
Odor:	Prepare BMP Report: (\$5,000 - \$10,450)/operation (\$5,000 - \$10,450)/operation x 0 operations = \$0/yr. <i>Based on estimates obtained from industry consultants; staff estimates that no Research In-vessel Digestion Operations will prepare a BMP report.</i>
	Implement BMP Report: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x (80 hrs. - 160 hrs.)/yr. = (\$3,400.80 - \$6,801.60)/yr. per operation (\$3,400.80 - \$6,801.60)/yr. per operation x 0 operations = \$0/yr. <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; only facilities accepting mixed material are likely to implement a BMP report</i>
Biogas Control:	Take precautions to minimize uncontrolled release: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 50 hrs./yr. = \$2,125.50/yr. per operation <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to take precautions to minimize uncontrolled release of biogas.</i>
Drainage and Spill Control:	Spill response = \$100/yr. per operation Staff estimate of equipment and supplies costs.
<b>Subtotal Cost (to any new In-vessel Digestion operation)</b>	
	<b>\$2,432.54/yr.</b>
Odor:	Prepare OIMP: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x (4 hrs. - 24 hrs.)/yr. = \$170.04 - \$1,020.24/yr. per operation <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to prepare OIMP.</i>
Site Restoration:	Provide notice; cleaning, and removal: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 40 hrs./yr. = \$1700/yr. per operation Equipment use = (\$1,200 - \$1,500)/yr. per operation (\$1,200 - \$1,500) + \$1,700 x one every 30 yrs. (1/30 yr.) x = \$96.67 - \$106.67/yr. per operation <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of equipment costs necessary to restore site. Site restoration only necessary upon site closure, which staff estimates will occur once every 30 years.</i>
<b>Subtotal cost (to an In-vessel Digestion op. that would have been regulated as a Transfer/Processing op.)</b>	
	<b>\$266.71 - \$1,126.91/yr.</b>
Personnel Health and Safety:	Make available IIPP: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x ¼ hr./yr. = \$5.31/yr. per operation <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to make IIPP available for review.</i>
Roads:	Design and maintain roads: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 50 hrs./yr. = \$2,125.50/yr. per operation Equipment: \$1,000/yr. per operation \$159/yr. (10 year amortization)] \$2,125.50/yr. + \$159/yr. = \$2,284.50/yr. per operation <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of labor hours and equipment costs.</i>
Supervision and Personnel:	Provide contact information for operator and other responsible persons, in writing, to EA and operating record: \$34.71/hr. + \$17.05/hr. = \$51.76/hr. \$51.76/hr. x ½ hrs./yr. = \$25.88/yr. per operation <i>Average total hourly compensation (wages and benefits) of public management, professional, and related - US Bureau of Labor Statistics; staff estimate of time to provide written information to EA and place in operating record.</i>
<b>Subtotal cost (to an in-vessel digestion op. that would have been regulated as a Composting op.)</b>	
	<b>\$2,315.69/yr.</b>
<b>Total cost (to an In-vessel Digestion op. that would have been regulated as a Transfer/Processing op.)</b>	
	<b>Any + TP = \$2,699.25 - \$3,559.45/yr.</b>
<b>Total cost (to an in-vessel digestion op. that would have been regulated as a Composting op.)</b>	
	<b>Any + CM = \$4,748.23/yr.</b>
<b>Dairy In-vessel Digestion Operations (0 active)</b>	
Odor:	Prepare BMP Report: (\$5,000 - \$10,450)/operation (\$5,000 - \$10,450)/operation x 0 operations = \$0/yr. <i>Based on estimates obtained from industry consultants; staff estimates that no Dairy In-vessel Digestion Operations will prepare a BMP report.</i>
	Implement BMP Report: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x (80 hrs. - 160 hrs.)/yr. = (\$3,400.80 - \$6,801.60)/yr. per operation (\$3,400.80 - \$6,801.60)/yr. per operation x 0 operations = \$0/yr. <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; staff estimates that no Dairy In-vessel Digestion Operations will implement a BMP report.</i>
Biogas Control:	Take precautions to minimize uncontrolled release: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 50 hrs./yr. = \$2,125.50/yr. per operation

	Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to take precautions to minimize uncontrolled release of biogas.
Drainage and Spill Control:	Spill response = \$100/yr. per operation Staff estimate of equipment and supplies costs.
<b>Subtotal Cost (to any new In-vessel Digestion operation)</b>	
	<b>\$2,225.50/yr.</b>
Odor:	Prepare OIMP: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x (4 hrs. - 24 hrs.)/yr. = \$170.04 - \$1,020.24/yr. per operation Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to prepare OIMP.
Site Restoration:	Provide notice; cleaning, and removal: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 40 hrs./yr. = \$1700/yr. per operation Equipment use = (\$1,200 - \$1,500)/yr. per operation (\$1,200 - \$1,500) + \$1,700 x one every 30 yrs. (1/30 yr.) x = \$96.67 - \$106.67/yr. per operation Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of equipment costs necessary to restore site. Site restoration only necessary upon site closure, which staff estimates will occur once every 30 years.
<b>Subtotal cost (to an In-vessel Digestion op. that would have been regulated as a Transfer/Processing op.)</b>	
	<b>\$266.71 - \$1,126.91/yr.</b>
Personnel Health and Safety:	Make available IIPP: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 1/4 hr./yr. = \$5.31/yr. per operation Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to make IIPP available for review.
Roads:	Design and maintain roads: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 100 hrs./yr. = \$4,251/yr. per operation Equipment: \$1,000/yr. per operation [\$159/yr. (10 year amortization)] \$4,251/yr. + \$159/yr. = \$4,410/yr. per operation Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of labor hours and equipment costs.
Supervision and Personnel:	Provide contact information for operator and other responsible persons, in writing, to EA and operating record: \$34.71/hr. + \$17.05/hr. = \$51.76/hr. \$51.76/hr. x 1/2 hrs./yr. = \$25.88/yr. per operation Average total hourly compensation (wages and benefits) of public management, professional, and related - US Bureau of Labor Statistics; staff estimate of time to provide written information to EA and place in operating record.
<b>Subtotal cost (to an in-vessel digestion op. that would have been regulated as a Composting op.)</b>	
	<b>\$4,441.19/yr.</b>
<b>Total cost (to an In-vessel Digestion op. that would have been regulated as a Transfer/Processing op.)</b>	
	<b>Any + TP = \$2,492.21 - \$3,352.41/yr.</b>
<b>Total cost (to an in-vessel digestion op. that would have been regulated as a Composting op.)</b>	
	<b>Any + CM = \$6,666.69/yr.</b>
<b>Distribution Center In-vessel Digestion Operations (0 active)</b>	
Odor:	Prepare BMP Report: (\$5,000 - \$10,450)/operation (\$5,000 - \$10,450)/operation x 0 operations = \$0/yr. Based on estimates obtained from industry consultants; staff estimates that no Distribution Center In-vessel Digestion Operations will prepare a BMP report.
	Implement BMP Report: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x (80 hrs. - 160 hrs.)/yr. = (\$3,400.80 - \$6,801.60)/yr. per operation (\$3,400.80 - \$6,801.60)/yr. per operation x 0 operations = \$0/yr. Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; staff estimates that no Distribution Center In-vessel Digestion Operations will implement a BMP report
Biogas Control:	Take precautions to minimize uncontrolled release: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 50 hrs./yr. = \$2,125.50/yr. per operation Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to take precautions to minimize uncontrolled release of biogas.
Drainage and Spill Control:	Spill response = \$100/yr. per operation Staff estimate of equipment and supplies costs.
<b>Subtotal Cost (to any new In-vessel Digestion operation)</b>	
	<b>\$2,225.50/yr.</b>
Odor:	Prepare OIMP: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x (4 hrs. - 24 hrs.)/yr. = \$170.04 - \$1,020.24/yr. operation Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to prepare OIMP.
Site Restoration:	Provide notice; cleaning, and removal: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 40 hrs./yr. = \$1700/yr. per operation Equipment use = (\$1,200 - \$1,500)/yr. per operation (\$1,200 - \$1,500) + \$1,700 x one every 30 yrs. (1/30 yr.) x = \$96.67 - \$106.67/yr. per operation Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of equipment costs necessary to restore site. Site restoration only necessary upon site closure, which staff estimates will occur once every 30 years.
<b>Subtotal cost (to an In-vessel Digestion op. that would have been regulated as a Transfer/Processing op.)</b>	
	<b>\$266.71 - \$1,126.91/yr.</b>
Personnel Health and Safety:	Make available IIPP: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 1/4 hr./yr. = \$5.31/yr. per operation Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to make IIPP available for review.
Roads:	Design and maintain roads: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 100 hrs./yr. = \$4,251/yr. per operation

	<p>\$1,000/yr. per operation [(\$159/yr. (10 year amortization))                  \$4,251/yr. + \$159/yr. = = \$4,410/yr. per operation  <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of labor hours and equipment costs.</i></p>	
Supervision and Personnel:	<p>Provide contact information for operator and other responsible persons, in writing, to EA and operating record: \$34.71/hr. + \$17.05/hr. = \$51.76/hr.                  \$51.76/hr. x ½ hrs./yr. = \$25.88/yr. per operation  <i>Average total hourly compensation (wages and benefits) of public management, professional, and related - US Bureau of Labor Statistics; staff estimate of time to provide written information to EA and place in operating record.</i></p>	
Subtotal cost (to an in-vessel digestion op. that would have been regulated as a Composting op.)		<b>\$4,441.19/yr.</b>
Total cost (to an In-vessel Digestion op. that would have been regulated as a Transfer/Processing op.)		<b>Any + TP = \$2,492.21 - \$3,352.41/yr.</b>
Total cost (to an in-vessel digestion op. that would have been regulated as a Composting op.)		<b>Any + CM = \$6,666.69/yr.</b>
<b>Limited Volume In-vessel Digestion Operations (0 active)</b>		
Odor:	<p>Prepare BMP Report: (\$5,000 - \$10,450)/operation                  (\$5,000 - \$10,450)/operation x 0 operations = \$0/yr.  <i>Based on estimates obtained from industry consultants; staff estimates that no Limited Volume In-vessel Digestion Operations will prepare a BMP report.</i></p>	
	<p>Implement BMP Report: \$27.38/hr. + \$15.13/hr. = \$42.51/hr.                  \$42.51/hr. x (80 hrs. - 160 hrs.)/yr. = (\$3,400.80 - \$6,801.60)/yr. per operation                  (\$3,400.80 - \$6,801.60)/yr. per operation x 0 operations = \$0/yr.  <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; staff estimates that no Limited Volume In-vessel Digestion Operations will implement a BMP report.</i></p>	
Biogas Control:	<p>Take precautions to minimize uncontrolled release: \$27.38/hr. + \$15.13/hr. = \$42.51/hr.                  \$42.51/hr. x 50 hrs./yr. = \$2,125.50/yr. per operation  <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to take precautions to minimize uncontrolled release of biogas.</i></p>	
Drainage and Spill Control:	<p>Spill response = \$100/yr. per operation                  Staff estimate of equipment and supplies costs.</p>	
Subtotal Cost (to any new In-vessel Digestion operation)		<b>\$2,225.50/yr.</b>
Odor:	<p>Prepare OIMP: \$27.38/hr. + \$15.13/hr. = \$42.51/hr.                  \$42.51/hr. x (4 hrs. - 24 hrs.)/yr. = \$170.04 - \$1,020.24/yr. per operation  <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to prepare OIMP.</i></p>	
Site Restoration:	<p>Provide notice; cleaning, and removal: \$27.38/hr. + \$15.13/hr. = \$42.51/hr.                  \$42.51/hr. x 40 hrs. = \$1700/yr. per operation                  Equipment use = (\$1,200 - \$1,500)/yr. per operation                  (\$1,200 - \$1,500) + \$1,700 x one every 30 yrs. (1/30 yr.) x = \$96.67 - \$106.67/yr. per operation  <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of equipment costs necessary to restore site. Site restoration only necessary upon site closure, which staff estimates will occur once every 30 years.</i></p>	
Subtotal cost (to an In-vessel Digestion op. that would have been regulated as a Transfer/Processing op.)		<b>\$266.71 - \$1,126.91/yr.</b>
Personnel Health and Safety:	<p>Make available IIPP: \$27.38/hr. + \$15.13/hr. = \$42.51/hr.                  \$42.51/hr. x ¼ hr./yr. = \$5.31/yr. per operation  <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to make IIPP available for review.</i></p>	
Roads:	<p>Design and maintain roads: \$27.38/hr. + \$15.13/hr. = \$42.51/hr.                  \$42.51/hr. x 150 hrs./yr. = \$6,376.50/yr. per operation                  \$2,000/yr. per operation [(\$317/yr. (10 year amortization))                  \$6,376.50/yr. + \$317 = \$6,693.50/yr. per operation  <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of labor hours and equipment costs.</i></p>	
Supervision and Personnel:	<p>Provide contact information for operator and other responsible persons, in writing, to EA and operating record: \$34.71/hr. + \$17.05/hr. = \$51.76/hr.                  \$51.76/hr. x ½ hrs./yr. = \$25.88/yr. per operation  <i>Average total hourly compensation (wages and benefits) of public management, professional, and related - US Bureau of Labor Statistics; staff estimate of time to provide written information to EA and place in operating record.</i></p>	
Subtotal cost (to an in-vessel digestion op. that would have been regulated as a Composting op.)		<b>\$6,724.69/yr.</b>
Total cost (to an In-vessel Digestion op. that would have been regulated as a Transfer/Processing op.)		<b>Any + TP = \$2,492.21 - \$3,352.41/yr.</b>
Total cost (to an in-vessel digestion op. that would have been regulated as a Composting op.)		<b>Any + CM = \$8,950.19/yr.</b>
<b>Medium Volume In-vessel Digestion Facilities (0 active)</b>		
Odor:	<p>Prepare BMP Report: (\$5,000 - \$10,450)/facility                  (\$5,000 - \$10,450)/facilities x 0 facilities = \$0/yr.  <i>Based on estimates obtained from industry consultants; staff estimates that no Medium Volume In-vessel Digestion Facilities will prepare a BMP report.</i></p>	
	<p>Implement BMP Report: \$27.38/hr. + \$15.13/hr. = \$42.51/hr.                  \$42.51/hr. x (80 hrs. - 160 hrs.)/yr. = (\$3,400.80 - \$6,801.60)/yr. per facility                  (\$3,400.80 - \$6,801.60)/yr. per facility x 0 facilities = \$0/yr.</p>	

	Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; staff estimates that no Medium Volume In-vessel Digestion Facilities will implement a BMP report.
Biogas Control:	Take precautions to minimize uncontrolled release: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 50 hrs./yr. = \$2,125.50/yr. per facility Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to take precautions to minimize uncontrolled release of biogas.
Drainage and Spill Control:	Spill response = \$100/yr. per facility Staff estimate of equipment and supplies costs.
<b>Subtotal Cost (to any new In-vessel Digestion facility)</b>	
<b>\$2,225.50/yr.</b>	
Odor:	Prepare OIMP: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x (4 hrs. - 24 hrs.)/yr. = \$170.04 - \$1,020.24/yr. per facility Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to prepare OIMP.
Site Restoration:	Provide notice; cleaning, and removal: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 40 hrs./yr. = \$1700/yr. per facility Equipment use = (\$1,200 - \$1,500)/yr. per facility (\$1,200 - \$1,500) + \$1,700 x one every 30 yrs. (1/30 yr.) x = \$96.67 - \$106.67/yr. per facility Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of equipment costs necessary to restore site. Site restoration only necessary upon site closure, which staff estimates will occur once every 30 years.
<b>Subtotal cost (to an In-vessel Digestion facility that would have been regulated as a Transfer/Processing facility)</b>	
<b>\$266.71 - \$1,126.91/yr.</b>	
Personnel Health and Safety:	Make available IIPP: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x ¼ hr./yr. = \$5.31/yr. per facility Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to make IIPP available for review.
Roads:	Design and maintain roads: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 200 hrs./yr. = \$8,502/yr. per facility \$3,000/facility [\$476/yr. (10 year amortization)] \$8,502/yr. + \$476 = \$8,978/yr. per facility Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of labor hours and equipment costs.
Supervision and Personnel:	Provide contact information for operator and other responsible persons, in writing, to EA and operating record: \$34.71/hr. + \$17.05/hr. = \$51.76/hr. \$51.76/hr. x ½ hrs./yr. = \$25.88/yr. per facility Average total hourly compensation (wages and benefits) of public management, professional, and related - US Bureau of Labor Statistics; staff estimate of time to provide written information to EA and place in operating record.
Equipment:	Provide equipment adequate in type, capacity, and number: \$500,000 [\$79,290/yr. (10 year amortization) per facility Staff estimate based on stakeholder input. Sufficiently maintain equipment adequate in type, capacity, and number: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 300 hrs./yr. = \$12,753/yr. per facility Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of labor hours to maintain equipment.
Housekeeping:	Provide adequate housekeeping: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 25 hrs./yr. = \$1,062.75/yr. per facility Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of labor hours to provide housekeeping.
Lighting:	Provide adequate lighting: \$5,000/facility [\$793/yr. (10 year amortization)] x 0.5 facilities (needing artificial light) for which no local land use requirement exists) = \$400/yr. per facility Staff estimate of cost to provide artificial lighting; staff estimates 50% of the Medium Volume In-vessel Digestion Facilities will need artificial lighting.
Visual Screening:	Consult with EA: \$44.96/hr. + \$24.84/hr. = \$69.80/hr. \$69.80/hr. x 2 hrs./yr. = \$139.60/yr. per facility \$139.60/yr. per facility x 0.1 facilities (for which no local land use requirement exists) = \$13.96/yr. per facility Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of hours to consult with EA; staff estimates 10% of Medium Volume In-vessel Digestion Facilities will have no local land use authority Provide aesthetics (e.g., fencing, berms, landscaping): \$10,000/facility [\$1,586/yr. (10 year amortization)] x 0.1 facilities (for which no local land use requirement exists) = \$160/yr. per facility Staff estimate of cost to provide aesthetics; staff estimates 10% of Medium Volume In-vessel Digestion Facilities will have no local land use authority. Maintain aesthetics: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 50 hrs./yr. = \$2,126/yr. per facility \$2,126/yr. per facility x 0.1 facilities (for which no local land use requirement exists) = \$212.60/yr. Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of hours to maintain aesthetics; staff estimates 10% of Medium Volume In-vessel Digestion Facilities will have no local land use authority
Water Supply:	Provide a safe and adequate water supply for drinking: = \$500/yr. per facility Staff estimate of cost to provide adequate drinking water.

	Provide a safe and adequate water supply emergency use: \$1,000/facility [\$159/yr. (10 year amortization)] = \$159/yr. per facility <i>Staff estimate of cost to provide adequate emergency water.</i>	
Subtotal cost (to an in-vessel digestion fac. that would have been regulated as a Composting fac.)		<b>\$103,560.50/yr.</b>
Total cost (to an In-vessel Digestion fac. that would have been regulated as a Transfer/Processing fac.)		<b>Any + TP = \$2,492.21 - \$3,352.41/yr.</b>
Total cost (to an in-vessel digestion fac. that would have been regulated as a Composting fac.)		<b>Any + CM = \$105,786/yr.</b>
<b>Large Volume In-vessel Digestion Facilities (0 active)</b>		
Odor:	Prepare BMP Report: (\$5,000 - \$10,450)/facility <i>Based on estimates obtained from industry consultants; staff estimates that one Large Volume In-vessel Digestion Facility will prepare a BMP report.</i>	
	Implement BMP Report: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x (80 hrs. - 160 hrs.)/yr. = (\$3,400.80 - \$6,801.60)/yr. per facility <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to implement activities required in the BMP report; staff estimates that one Large Volume In-vessel Digestion Facility will implement a BMP report.</i>	
Biogas Control:	Take precautions to minimize uncontrolled release: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 50 hrs./yr. = \$2,125.50/yr. per facility <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to take precautions to minimize uncontrolled release of biogas.</i>	
Drainage and Spill Control:	Spill response = \$100/yr. per facility <i>Staff estimate of equipment and supplies costs.</i>	
0.1% Physical Contaminants:	Sampling and analysis: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 1/4 hr. = \$14.17 \$14.17 + \$48.00 lab cost = \$62.17/sample 26,000 – 130,000 tons x 0.5 facilities x 2 yd <sup>3</sup> /ton x 0.6 (40% volume reduction) x 1 sample/5,000 yd <sup>3</sup> = (3 -16) samples \$62.17/sample x (3 – 16) samples/yr. = \$186.51 - \$994.72/yr. per facility <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to collect samples; current laboratory pricing; range of tonnage based on an estimate of 100 to 500 tons per day over 260 operating days per year; 0.5 of the Large Volume In-vessel Digestion Facilities will compost themselves; in-vessel digestion will reduce feedstock volume by 40%.</i>	
	Removing contaminants: (\$0 - \$11)/ton x 26,000 – 130,000 tons/yr. = \$0 - \$1,430,000/yr. per facility <i>Based on estimates from industry: some operations/facilities are already meeting this standard, some will need to hire additional labor and/or purchase additional equipment to meet the standard; tonnage based on estimated throughput.</i>	
Subtotal Cost (to any new In-vessel Digestion facility)		<b>\$10,812.81 – \$1,450,472.82/yr.</b>
Odor:	Prepare OIMP: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x (4 hrs. - 24 hrs.)/yr. = \$170.04 - \$1,020.24/yr. per facility <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to prepare OIMP.</i>	
Site Restoration:	Provide notice; cleaning, and removal: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 40 hrs./yr. = \$1700/yr. per facility Equipment use = (\$1,200 - \$1,500)/yr. per facility (\$1,200 - \$1,500) + \$1,700 x one every 30 yrs. (1/30 yr.) = \$96.67 - \$106.67/yr. per facility <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of equipment costs necessary to restore site. Site restoration only necessary upon site closure, which staff estimates will occur once every 30 years.</i>	
Subtotal cost (to an In-vessel Digestion fac that would have been regulated as a Transfer/Processing fac)		<b>\$266.71 - \$1,126.91/yr.</b>
Personnel Health and Safety:	Make available IIPP: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 1/4 hr./yr. = \$5.31/yr. per facility <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of time to make IIPP available for review.</i>	
Roads:	Design and maintain roads: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 260 hrs./yr. = \$11,052.60/yr. per facility \$4,000/facility [\$634/yr. (10 year amortization)] \$11,052.60/yr. + \$634/yr. = \$11,686.60/yr. per facility <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of labor hours and equipment costs.</i>	
Supervision and Personnel:	Provide contact information for operator and other responsible persons, in writing, to EA and operating record: \$34.71/hr. + \$17.05/hr. = \$51.76/hr. \$51.76/hr. x 1/2 hrs./yr. = \$25.88/yr. per facility <i>Average total hourly compensation (wages and benefits) of public management, professional, and related - US Bureau of Labor Statistics; staff estimate of time to provide written information to EA and place in operating record.</i>	
Equipment:	Provide equipment adequate in type, capacity, and number: \$500,000 [\$79,290/yr. (10 year amortization)] per facility <i>Staff estimate based on stakeholder input.</i>	
	Sufficiently maintain equipment adequate in type, capacity, and number: \$27.38/hr. + \$15.13/hr. = \$42.51/hr. \$42.51/hr. x 400 hrs./yr. = \$17,004/yr. per facility <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of labor hours to maintain equipment.</i>	
Housekeeping:	Provide adequate housekeeping: \$27.38/hr. + \$15.13/hr. = \$42.51/hr.	

	<p>\$42.51/hr. x 25 hrs./yr. = \$1,062.75/yr. per facility  <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of labor hours to provide housekeeping.</i></p>
Lighting:	<p>Provide adequate lighting: \$5,000/facility [\$793/yr. (10 year amortization)] x 0.5 facilities (needing artificial light) for which no local land use requirement exists) = \$400/yr. per facility  <i>Staff estimate of cost to provide artificial lighting; staff estimates 50% of the Large Volume In-vessel Digestion Facilities will need artificial lighting.</i></p>
Visual Screening:	<p>Consult with EA: \$44.96/hr. + \$24.84/hr. = \$69.80/hr.  \$69.80/hr. x 2 hrs./yr. = \$139.60/yr. per facility  \$139.60/yr. per facility x 0.1 facilities (for which no local land use requirement exists) = \$13.96/yr. per facility  <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of hours to consult with EA; staff estimates 10% of Large Volume In-vessel Digestion Facilities will have no local land use authority</i></p> <p>Provide aesthetics (e.g., fencing, berms, landscaping): \$10,000/facility [\$1,586/yr. (10 year amortization)] x 0.1 facilities (for which no local land use requirement exists) = \$160/yr. per facility  <i>Staff estimate of cost to provide aesthetics; staff estimates 10% of Large Volume In-vessel Digestion Facilities will have no local land use authority.</i></p> <p>Maintain aesthetics: \$27.38/hr. + \$15.13/hr. = \$42.51/hr.  \$42.51/hr. x 50 hrs./yr. = \$2,126/yr. per facility  \$2,126/yr. per facility x 0.1 facilities (for which no local land use requirement exists) = \$212.60/yr.  <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of hours to maintain aesthetics; staff estimates 10% of Large Volume In-vessel Digestion Facilities will have no local land use authority</i></p>
Water Supply:	<p>Provide a safe and adequate water supply for drinking: = \$500/yr. per facility  <i>Staff estimate of cost to provide adequate drinking water.</i></p> <p>Provide a safe and adequate water supply emergency use: \$1,000/facility [\$159/yr. (10 year amortization)] = \$159/yr. per facility  <i>Staff estimate of cost to provide adequate emergency water.</i></p>
Subtotal cost (to an in-vessel digestion fac. that would have been regulated as a Composting fac.)	
<b>\$110,520.10/yr.</b>	
Total cost (to an In-vessel Digestion fac. that would have been regulated as a Transfer/Processing fac.)	
<b>Any + TP = \$11,079.52 - \$1,451,598.73/yr.</b>	
Total cost (to an in-vessel digestion fac. that would have been regulated as a Composting fac.)	
<b>Any + CM = \$121,332.91 - \$1,560,991.92/yr.</b>	
<b>POTW Exclusion (0 active)</b>	
Anaerobically Digestible Material:	<p>Request for consideration of additional types of material: \$27.38/hr. + \$15.13/hr. = \$42.51/hr.  \$42.51/hr. x 2 hrs./request x = \$85.02/request  \$85.02/request x 0.25 requests/yr. = \$21.26/yr.  <i>Average total hourly compensation (wages and benefits) of state and local government worker - US Bureau of Labor Statistics; staff estimate of the amount of time spent on each consultation; staff estimates one request every 4 years.</i></p>
<b>Total Cost</b>	
<b>\$21.26/yr.</b>	
<b>California Department of Food and Agriculture</b>	
Prohibition Exceptions:	<p>Consultation with SWRCB and CalRecycle: \$54.75/hr. + \$30.25/hr. = \$85.00/hr.  \$85.00/hr. x ½ hr./consult x 2 consults/yr. = \$85/yr.  <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the amount of time spent on each consultation and number of consultations.</i></p>
Anaerobically Digestible Material:	<p>Consult with SWRCB and CalRecycle on additional types of material:  \$54.75/hr. + \$30.25/hr. = \$85.00/hr.  \$85.00/hr. x 1 hr./consult x 2 consults/yr. = \$170/yr.  <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the amount of time spent on each consultation and number of consultations.</i></p>
<b>Total Cost</b>	
<b>\$255/yr.</b>	
<b>State Water Resources Control Board</b>	
Prohibition Exceptions:	<p>Consultation with CDFA and CalRecycle: \$54.75/hr. + \$30.25/hr. = \$85.00/hr.  \$85.00/hr. x ½ hr./consultations x 2 consults/yr. = \$85/yr.  <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the amount of time spent on each consultation and number of consultations.</i></p>
Anaerobically Digestible Material:	<p>Consult with CDFA and CalRecycle on additional types of material: \$54.75/hr. + \$30.25/hr. = \$85.00/hr.  \$85.00/hr. x 1 hr./consult x 2 consults/yr. = \$170/yr.  <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the amount of time spent on each consultation and number of consultations.</i></p>
<b>Total Cost</b>	
<b>\$255/yr.</b>	
<b>CalRecycle</b>	
Prohibition Exceptions:	<p>Consultation with CDFA and SWRCB: \$54.75/hr. + \$30.25/hr. = \$85.00/hr.  \$85.00/hr. x ½ hr./consultations x 2 consults/yr. = \$85/yr.  <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the amount of time spent on each consultation and number of consultations.</i></p>
Anaerobically Digestible Material:	<p>Consult with CDFA and SWRCB on additional types of material: \$54.75/hr. + \$30.25/hr. = \$85.00/hr.</p>

	$\$85.00/\text{hr.} \times 1 \text{ hr./consult} \times 2 \text{ consults/yr.} = \$170/\text{yr.}$ <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the amount of time spent on each consultation and number of consultations.</i>
<b>Total Cost</b>	
<b>\$255/yr.</b>	
<b>Enforcement Agencies</b>	
Research:	$\text{Review 2-yr. report: } \$54.75/\text{hr.} + \$30.25/\text{hr.} = \$85.00/\text{hr.}$ $\$85.00/\text{hr.} \times 2 \text{ hrs./report} \times 4 \text{ reports/yr.} = \$680/\text{yr.}$ <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the amount of time spent reviewing each report and number of Research reports.</i>
	$\text{Approve extension: } \$54.75/\text{hr.} + \$30.25/\text{hr.} = \$85.00/\text{hr.}$ $\$85.00/\text{hr.} \times 2 \text{ hrs./extension} \times 2 \text{ extensions/yr.} = \$340/\text{yr.}$ <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the number of Research extensions received and the amount of time spent reviewing each extension.</i>
Alt. Sampling and Analysis:	$\text{Review and approve/deny request for alternative sampling or analysis: } \$54.75/\text{hr.} + \$30.25/\text{hr.} =$ $\$85.00/\text{hr.}$ $\$85.00/\text{hr.} \times 4 \text{ hrs./request} \times 20 \text{ requests/yr.} = \$6,800/\text{yr.}$ <i>Average total hourly compensation (wages and benefits) suggested by an affected agency for government worker conducting this task; staff estimate of the number of alternative sampling requests received and the amount of time spent reviewing and approving/denying each request.</i>
<b>Total Cost</b>	
<b>\$7,820/yr.</b>	

	Yr. 1 - 2	Yr. 3	Total #	Total Cost
Research In-vessel Digestion Operations		2	2	$1 \times \$2,699.25 - \$3,559.45/\text{yr.} = [\$2,699.25 - \$3,559.45]/\text{yr.}$ $1 \times \$4,748.23/\text{yr.} = \$4,748.23/\text{yr.}$ $[\$2,699.25 - \$3,559.45]/\text{yr.} + \$4,748.23 = \$7,447.48 - \$8,307.68/\text{yr.}$
Dairy In-vessel Digestion Operations				
Distribution Center In-vessel Digestion Operations				
Limited Volume In-vessel Digestion Operations		2	2	$1 \times [\$2,492.21 - \$3,352.41]/\text{yr.} = [\$2,492.21 - \$3,352.41]/\text{yr.}$ $1 \times \$8,950.19/\text{yr.} = \$8,950.19/\text{yr.}$ $[\$2,492.21 - \$3,352.41]/\text{yr.} + \$8,950.19/\text{yr.} = \$11,442.40 - \$12,302.60/\text{yr.}$
Medium Volume In-vessel Digestion Facilities		2	2	$1 \times [\$2,492.21 - \$3,352.41]/\text{yr.} = [\$2,492.21 - \$3,352.41]/\text{yr.}$ $1 \times \$105,786/\text{yr.} = \$105,786.00/\text{yr.}$ $[\$2,492.21 - \$3,352.41]/\text{yr.} + \$105,786.00/\text{yr.} = \$108,278.21 - \$109,138.41/\text{yr.}$
Large Volume In-vessel Digestion Facilities		2	2	$1 \times [\$11,079.52 - 1,451,598.73]/\text{yr.} = [\$11,079.52 - \$1,451,598.73]/\text{yr.}$ $1 \times [\$121,332.91 - \$1,560,991.92]/\text{yr.} = [\$121,332.91/\text{yr.} - \$1,560,991.92]/\text{yr.}$ $[\$11,079.52 - \$1,451,598.73]/\text{yr.} + [\$121,332.91/\text{yr.} - \$1,560,991.92]/\text{yr.} =$ $\$132,412.43 - \$3,012,590.65/\text{yr.}$
POTW Exclusions	26	3	29	$29 \times \$21.26/\text{yr.} = \$616.54/\text{yr.}$ $\$260,197.06 - \$3,142,955.88/\text{yr.}$
California Department of Food and Agriculture				\$255.00/yr.
State Water Resources Control Board				\$255.00/yr.
CalRecycle				\$255.00/yr.
Enforcement Agencies				\$7,820.00/yr.
				<b>\$8,585/yr.</b>
				<b>\$268,782.06 - \$3,151,540.88/yr.</b>