

# EXHIBIT A

## Recycling Provisions

CALGreen Code Sections: 301.3.1, 5.408.1, 5.410.1, and A5.405.4

### Attachment to Economic and Fiscal Impact Statement (Regulations and Orders)

California Building Standards Commission – BSC 06-13  
Amend the 2013 California Green Building Standards Code, CCR, Title 24, Part 11

This attachment supports the Form 399, which presents the responses for three specific sub-sections of the proposed amendments to the 2013 California Green Building Standards Code. The three specific sub-sections addressed in this Form 399 and attachment pertain to the proposed resources recycling and reuse amendments in the areas of recycled content, organics waste storage, and construction and demolition diversion. This attachment addresses and expands on specific responses shown in the Form 399. The numbering format in this attachment matches the numbering in the Form 399; not all of the responses in the Form 399 have supporting information in this attachment.

#### Form 399 Responses:

##### A. ESTIMATED PRIVATE SECTOR COST IMPACTS

###### 1. Describe the types of businesses (Include nonprofits):

- a) Recycled Content: the proposed regulation changes the existing voluntary performance measures related to non-residential recycled content building materials to include a hybrid prescriptive approach that includes voluntary measures, and provides more flexibility in compliance and enforcement.
  - For the purposes of this analysis, it is assumed that businesses employing more than ten persons would be involved in new construction of non-residential buildings of sufficient size to be impacted by this regulation. It is assumed that construction businesses with fewer than 10 persons employed are largely involved in remodel or reconstruction, and therefore are not affected by this regulation. Of the 60,222 total business involved in all construction in California. (U.S. Census Bureau, 2012 Economic Census – California), Regulation part 5g would apply to 6-digit NAICs sectors that total 25,160 businesses. Twenty-two percent of all construction businesses have 10 or more employees; therefore applying this percentage to the redacted total of 25,160 businesses, approximately 5,600 businesses involved in new construction would be impacted by the proposed amendments. (Source: U.S. Census of Business Survey Report, “County Business Patterns”, Q3-2013.)

- Of the 5,600 businesses affected, 94% have between 10 and 99 employees, and are considered “small businesses”.
- b) Organic Waste: the existing measure requires that non-residential new construction and non-residential additions that result in an increase of 30% or more of floor space include a designated space for storage, collection, and deposition of paper, corrugated cardboard, glass, plastics and metals. This amendment in the proposed regulation would add “organic waste” to that list of recyclables requiring designated space for storage, collection, and deposition. This amendment is supported by:
- AB 1826 (Chapter 727, Statutes of 2014), requires, as of April 1, 2016, any business generating 8 cubic yards or more of organic waste to arrange for recycling services specific to that waste. The threshold for required service is reduced to 4 cubic yards of organic waste on January 1, 2017, and to 4 cubic yards of commercial solid waste effective January 1, 2019.
  - Rural jurisdictions that meet and apply for the exemption of Public Resources Code 42649.82 (a)(2)(A) et seq. will also be exempt from the requirement of organics waste storage and collection space.
  - The number of businesses impacted by the proposed organic waste requirements will be in a range similar to the estimate made under “Recycled Content” above.
- c) Construction and Demolition (C&D) Material Diversion: the existing C&D waste diversion requirements apply to newly constructed buildings and building additions of 1,000 square feet or greater, and/or building alterations with a permit valuation of \$200,000 or more (for occupancies within the authority of the CBSC). The proposed regulation applies these existing C&D waste diversion requirements to **all** non-residential additions and alterations requiring a permit, regardless of size or valuation.
- The number of businesses impacted by the proposed C&D requirements are the same as described under “Recycled Content” above.
- d) Summary of impact
- Approximately 5,600 businesses involved in construction of non-residential structures, will be impacted under by the proposed amendments for Recycled Content, Organic Waste and C&D Diversion requirements.

## B. ESTIMATED COSTS

1. What are the total statewide dollar costs ...to comply with this regulation over its lifetime?

- The California Building Standards Commission normally updates or revises the California Green Building Standards Code every 3 years. It is expected that these regulations will remain unchanged for three review cycles, therefore the lifetime of this regulation is considered to be 10 years.
- The initial costs are identical to the ongoing costs, as all are directly connected to individual construction projects as they occur over time. There are no start-up costs. Individuals will not be affected, as this regulation primarily impacts non-residential construction.

a) Recycled Content:

- Currently available materials with specified recycled product content include fiberglass insulation, gypsum wallboard, compost, mulch, aggregate base rock, paint and carpet. The qualifying paint products are somewhat lower in price than standard non-compliant products. The wallboard and fiberglass are roughly comparable in price; carpet manufactured with recycled carpet content is somewhat higher in price.
- Contractors are free to choose from the list of available compliant products in order to meet the goals of the regulation. It is expected that the products chosen will largely be from among the lower-cost material options.
  - i. Prices for recycled-content paint are roughly \$19.50 per gallon, or 15% less than the average price of \$22.50 per gallon for standard manufactured paint.
  - ii. Prices for fiberglass insulation with 58% recycled content glass is approximately \$0.75 per sq.ft., while non-recycled content fiberglass for the same dimensions is available between \$0.75 to \$1.00 per sq.ft.; thus, prices for recycled content fiberglass vary between zero and 25% less.
  - iii. There is limited price data for recycled-content carpet, but the current nylon recycling process results in product prices approximately 10% to 15% above the price for virgin carpet.
- The proposed amendments for recycled content materials are not mandatory. If contractors voluntarily choose to meet the tiered specifications for recycled content materials, they are free to choose how many and which materials from the list of available compliant products they want to select in order to meet the specifications of the tier, e.g., in order to meet Tier 1 specifications, you must use two recycled content materials. It is expected that for most building projects, the products chosen will largely be from among the material options that result in cost savings or no cost increase.

- While costs to individual business may vary depending on if they choose to voluntarily meet one of the tiered specifications and which recycled content products they select, overall costs for materials with higher recycled content are expected to be between zero and slightly reduced.

b) Organic Waste:

- The addition of organic waste receptacles to the existing required depositories (i.e., paper, corrugated cardboard, glass, plastics and metals) will generally require no additional expenditures for construction.
- Although space will be required for the additional receptacles, in most cases this is expected to be co-located with the existing required receptacles normally located at loading docks or in designated areas in the parking lots where additional space is already available but just needs to be designated.

c) C&D Material Diversion:

- The proposed amendments require C&D material diversion as shown in Chapter 5 and would now apply to all building additions and alterations requiring a permit, regardless of size or valuation.
- There is no increased cost for C&D material diversion because whenever waste is generated, it needs to be managed, either through landfill disposal or through diversion. The costs for the two alternative methods are equivalent, so there is no net additional cost.
- Tipping fees for near-urban landfills and “Mixed C&D recyclers” were determined to be statistically not different, at approximately \$62 per ton. The comparison was made between six mixed C&D recycling sites and the median in tipping fees for the Bay Area and Southern California.
- If construction firms choose to include source separation prior to disposal, there could be net cost savings.

d) Summary of impact:

- The overall cost of the three components is expected to total less than \$1 million annually, with most construction projects encountering zero cost impact.

2. Explain the need for State regulation given the existence or absence of Federal regulations:

a) Recycled Content:

- The current performance based calculation remains in CALGreen Part 11, but the voluntary prescriptive standards will augment those and will provide a streamlined method for compliance.

- Currently there are no federal regulations for recycled material content in products used in construction of buildings.

b) Organic Waste:

- There are no federal regulations for space allocation for the collection of organic waste.

c) C&D Material Diversion:

- There are no federal regulations requiring diversion of C&D materials in non-residential construction.

**C. ESTIMATED BENEFITS**

1. Explain the estimated benefits to be derived from this proposal:

SB 1473 (Ch. 719, Stats 2008) grants CBSC authority to develop green building standards for occupancies where no other agency has authority or expertise. The benefits of these regulations include sustaining California's natural resources by reduction in energy, reduction in greenhouse gas emissions, and reduced dependency on fossil fuel.

a) Recycled Content:

- This regulation will provide direct market support to assist the state in moving further toward the 75% statewide recycling goal of AB 341 (Chapter 476, Statutes of 2011).
- Specifying options available that meet the standards for recycled content of new construction materials, this regulation will indirectly support the expansion of existing businesses currently engaged in manufacturing of these products, as well as the potential establishment of some new businesses.

b) Organic Waste:

- This regulation will provide indirect market support to assist the state in meeting the 75% statewide recycling goal of AB 341 (Chapter 476, Statutes of 2011).
- Specifying space in new construction where occupants are expected to generate organic waste will facilitate the collection and recycling of these waste materials.

c) C&D Material Diversion:

- This regulation will provide indirect market support to assist the state in meeting the 75% statewide recycling goal of AB 341 (Chapter 476, Statutes of 2011).
- CalRecycle is proposing a strategy to increase waste diversion. AB 341 (Chapter 476, Statutes of 2011) set California's statewide recycling goal at 75% and directed CalRecycle to propose

statewide strategies to assist in meeting that goal. Construction and demolition waste represents over 20% of what is landfilled. Reducing the threshold for when construction and demolition waste diversion is required would increase overall recycling.

d) Summary of Benefits

- The benefits of these regulations include sustaining California's natural resources by reduction in energy, reduction in greenhouse gas emissions, and reduced dependency on fossil fuel.
- These regulations will provide indirect market support to assist the state in meeting the 75% statewide recycling goals of AB 341 (Chapter 476, Statutes of 2011), thus indirectly supporting the expansion of existing California businesses currently engaged in recycling and manufacturing of recycled content products.

2. What are the total statewide benefits from these regulations over their lifetime?

- It is not possible to assign a lifetime monetary value to this regulation.

a) Recycled Content:

- The benefit for the increased use of recycled materials in products used in construction of new non-residential buildings will indirectly lead to increased jobs in collection, recycling, and manufacturing of recycled content building materials.
- The increased use of recycled materials in products used in construction will result in significant greenhouse gas emission reductions, which is a key goal of the Air Resource Board's 2014 Scoping Plan Update.

b) Organic Waste:

- The addition of organic waste receptacles to the existing required depositories (i.e., paper, corrugated cardboard, glass, plastics and metals) will result in significant organic materials diversion and greenhouse gas emission reductions, which are crucial to CalRecycle's achievement of the AB 341 75% statewide recycling goal and the Air Resource Board's 2014 Scoping Plan Update.

c) C&D Materials Diversion:

- This regulation would increase overall recycling and support jurisdiction efforts to implement mandatory commercial recycling programs pursuant to AB 341.
- Construction and demolition waste represents over 20% of what is landfilled. Reducing the threshold for when construction and

demolition waste diversion is required would increase overall recycling.

d) Summary:

- Reduced landfill disposal of both construction and demolition materials and organic materials provides direct benefits statewide. The increased use of recycled materials in construction will result in significant greenhouse gas emission reductions, which is a key goal of the Air Resource Board's 2014 Scoping Plan Update.

## **D. ALTERNATIVES TO THE REGULATIONS**

1. List Alternatives considered and describe them...:

a) Recycled Content:

- Do not adopt a regulation; rely solely on reduced market prices for recycled-content products.
- Mandate use of recycled material content and report use of end-use products and commodities.

b) Organic Waste:

- Do not adopt a regulation; rely solely on individual incentives and occupants of the constructed facilities to allocate separate collection areas for compostable materials.

c) C&D Materials Diversion:

- Do not adopt a regulation; rely solely on individual incentives and construction firms to voluntarily increase the diversion of C&D materials from conventional landfill disposal.

d) Summary:

- Do not adopt a regulation, rely on voluntary diversion methods, and voluntary use of recycled materials in new non-residential construction.

2. Were performance standards considered to lower compliance costs?

a) Recycled Content:

- Current voluntary measures include a performance approach. This amended language adds a hybrid prescriptive approach.
- Based upon discussions with stakeholders, the hybrid prescriptive approach will ease both compliance and enforcement while retaining the performance measures.

b) Organic Waste:

- The proposed regulation does not change the underlying compliance method of the existing regulation.

c) C&D Materials Diversion:

- The proposed language amends the existing regulations which already includes a performance requirement.

d) Summary:

- None of these proposals remove any performance requirements that currently exist. A hybrid prescriptive approach has been added for the recycled content materials to simplify compliance and enforcement.