

**DRAFT EXPRESS TERMS for the 2016
CALIFORNIA GREEN BUILDING STANDARDS CODE,
(CALGreen), PART 11,
CALIFORNIA BUILDING STANDARDS CODE,
TITLE 24, CALIFORNIA CODE OF REGULATIONS**

- **Proposed code language for the 2015 Triennial Code Adoption Cycle**

LEGEND FOR EXPRESS TERMS

1. New California amendments: All such language appears *underlined and in italics*.

2. Repealed text: All such language appears in strikeout.

[Information for the reader is bracketed and in red italics]

Proposal 5i: Compost & Mulch Requirements

Statement of specific purpose, problem, rationale and benefits:

The following proposal is to include new mandatory requirements for building sites that install more than 1,000 square feet of new or renovated landscaped areas (excluding hardscapes). The requirements would lead to greater water conservation from landscapes and result in greater biodiversity, enhanced water-holding capacity of soils, and improved water runoff quality. In addition, the use of compost helps reduce greenhouse gas (GHG) emissions by an average of 0.54 metric tons of carbon dioxide equivalent per ton of compost applied. [Source: ARB Method for Estimating GHG Reductions from Compost from Commercial Organic Waste:

http://www.arb.ca.gov/cc/protocols/localgov/pubs/compost_method.pdf].

Applying compost and mulch to landscapes has many benefits:

Benefits of Compost	Benefits of Mulch
• Improves soil water-holding capacity • Improves soil permeability • Adds macro and micro nutrients, humic acids, organic matter • Sequesters carbon in soil • Provides variety of beneficial soil organisms; potential to fight soil borne diseases • Better soil structure, formation of soil aggregates • Reduced use of pesticides and herbicides • Reduced GHG emissions • Reduced N₂O emissions by avoiding synthetic fertilizer production • Makes use of a local recycled product • Supports municipal recycling programs that collect and generate compost	• Protect soil from sun and erosion • Moderate soil temperature • Reduce evaporation from sun and wind • Smother weeds; reduce pesticide use • Will eventually break down and add organic matter • Enhance appearance • Reduce storm water runoff • Improve water quality • Reduce GHGs when using recycled content mulch products • Supports municipal recycling programs that collect materials for mulch products

In addition, the incorporation of one inch of compost in soils increases the water-holding capacity of soils by as much as 25% [a range of 3-25% is cited by numerous sources]. One inch of compost reduces the need for synthetic fertilizer and may help prevent leaching of soil nutrients. Applying three inches of mulch on top of landscaped areas increases water retention by 40-70% as compared to a two-inch layer. [Source: East Bay MUD, WaterSmart Guidebook, 2008].

History:

Elements of the Model Water Efficient Landscape Ordinance (MLO or WELO) that address irrigation efficiency are included in CALGreen. However, effective water conservation strategies in landscapes are further accomplished by increasing the water holding capacity of soils and by minimizing evaporation of water delivered to plants. Incorporating compost in soils and installing drip irrigation underneath the mulch layer for irrigated areas of the landscape will further reduce water use and evaporation.

Verification and Cost:

The verification of mulch levels is accomplished by a simple depth measurement on site. The verification of the organic content of soils may require a soil analysis report, which is already standard in the industry. If done before amendment and planting, the soil analysis report would indicate the appropriate amount of soil amendments to mix into the topsoil during landscaping; this knowledge can reduce costs by avoiding over-fertilization and resulting water quality impacts. Verification for the compost application could be the soil analysis report plus a bill of lading for the purchased product, or a second soil analysis.

Costs for mulching planting areas are negligible since mulching of two-inches is already standard practice and is required by the statewide MLO. The additional one-inch layer of mulch is expected to add a small amount of cost. Adding compost to soils is considered cost neutral since most soils need amendment during plant installation, and the use of compost as an amendment is equal or less than the cost of synthetic soil amendments.

Proposal 5i: Compost and Mulch Requirements

SECTION 5.102 DEFINITIONS

5.102.1 Definitions.

SOIL ANALYSIS REPORT: A soil analysis report satisfies the following conditions:

- Determination of soil texture, indicating the percentage of organic matter.
- An approximate soil infiltration rate (either measured or derived from soil texture/infiltration rate tables.) A range of infiltration rates shall be noted where appropriate.
- Measure of pH and total soluble salts.

[Note to reader: This definition is based on the MLO description of a soil analysis report]

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SECTION 5.106 SITE DEVELOPMENT

5.106.1 Storm water pollution prevention. ...

5.106.3. Water Conserving Landscapes. Newly constructed projects and additions that install more than 1,000 square feet of new landscaped area shall include strategies that allow for greater soil retention of water and encourage healthy plant growth through the following measures:

5.106.3.1. Mulching. A minimum three-inch layer of plant-based (organic) mulch or minimum two-inch layer of inorganic mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, creeping or rooting groundcovers, or direct seeding application where mulch is contraindicated.

Note: It is recommended that drip irrigation be installed underneath the mulch layer for irrigated areas of the landscape where mulching is indicated.

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