



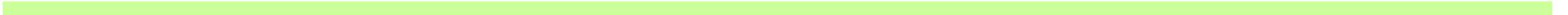
CALGreen & Construction Waste Diversion

Presented to:

CALGreen Building Code &
Construction Materials Diversion Workshop

Presented by:

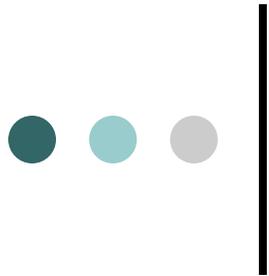
A. Bambi Tran, Assoc. AIA, LEED AP, GA, MRED
09 March 2011



● ● ● | Outline



- Green standards
- CALGreen
- CALGreen's construction waste diversion measures
- CALGreen and LEED
- Implementing CALGreen's construction waste diversion measures
- Conclusion



Green Standards

○ Code

- 2010 California Green Building Standards Code (CALGreen)
- Draft ASHRAE 189P

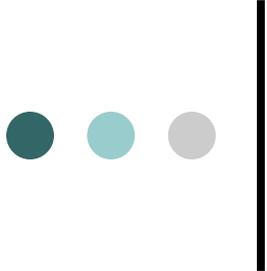
○ Rating Systems:

- Leadership for Energy and Environmental Design (LEED®)
- Green Globes
- ENERGY STAR
- Local Green Building Rating Systems

○ Green Product Certifications:

- ENERGY STAR
- FSC-Certified
- GreenSeal
- GreenGuard
- Cradle to Cradle
- Carpet & Rug Institute Green Label





2010 California Green Building Standards Code (CALGreen)

- Title 24, Part 11
- Purpose:
 - Reduce greenhouse gas emissions from buildings
 - Promote environmentally responsible, cost-effective, healthier places to live and work
 - Reduce energy and water consumption
 - Respond to directives by the Governor
- Derived from variety of resources, including:
 - CHPS, LEED, Green Globes, Build It Green, Draft ASHRAE 189P
- Effective 01 Jan 2011



CALGreen



CALGreen: Application

- Applicable to all new buildings in CA:
 - Low-Rise Residential (up to 3 stories): Under jurisdiction of HCD



- Hotels, motels, lodging houses
- Apartments, condominiums
- 1-2 family dwellings, townhouses, factory-built housing
- Dormitories, homeless shelters, congregate residences, employee housing
- Others
- www.hcd.ca.gov/CALGreen.html



CALGreen: Application

- Nonresidential:



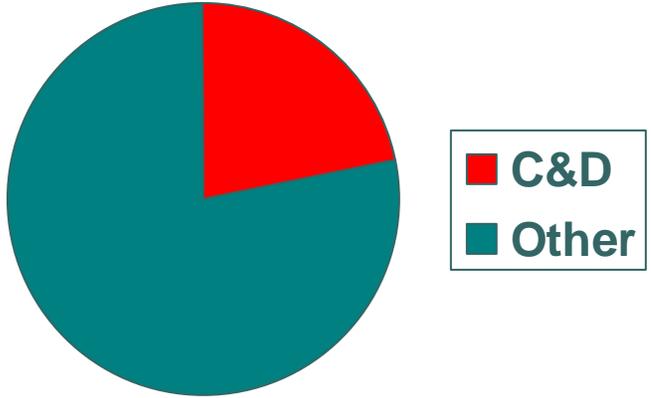
- State owned buildings
- State university and community college buildings
- Privately owned buildings used for retail, office, medical services
- Others
- Office of Statewide Health Planning and Development (OSHPD): Adopted voluntary measures for hospitals and medical care bldgs
- Division of the State Architect (DSA): Adopted voluntary and mandatory measures for public schools
- www.bsc.ca.gov/CALGreen/default.htm

**Table 1: NON-RESIDENTIAL BUILDINGS: Green Building Standards Code
Proposed Performance Approach**

Category	Environmental Performance Goal	Tier 1	Tier 2
All	Minimum Mandatory	Meet all of the provisions of Chapter 5	Meet all of the provisions of Chapter 5
Planning and Design	Designated Parking for Fuel Efficient Vehicles	10 percent of total spaces	12 percent of total spaces
	Cool Roof to Reduce Heat Island Effect	Roof Slope < 2:12 SRI 64 Roof Slope > 2:12 SRI 16	Roof Slope < 2:12 SRI 78 Roof Slope > 2:12 SRI 20
		1 additional Elective from Division A5.1	3 additional Electives from Division A5.1
Energy Efficiency	Energy Performance	Exceed 2008 CA Energy Code by 15 percent	Exceed 2008 CA Energy Code by 30 percent
Water Efficiency and Conservation	Indoor Water Use	30 percent Savings	35 percent Savings
	Outdoor Water Use	60 percent of ETo times the landscape area	55 percent of ETo times the landscape area
		1 additional Elective from Division A5.3	3 additional Electives from Division A5.3
Material Conservation and Resource Efficiency	Construction Waste Reduction	At least 65 percent reduction	At least 80 percent reduction
	Recycled Content	Utilize recycled content materials for 10 percent of total material cost	Utilize recycled content materials for 15 percent of total material cost
		1 additional Elective from Division A5.4	3 additional Electives from Division A5.4
Environmental Quality	Low-VOC Resilient Flooring	80 percent of flooring meets CHPS VOC limits	90 percent of flooring meets CHPS VOC limits
	Low-VOC Thermal Insulation	Comply with CHPS VOC limits	Install no-added formaldehyde insulation & comply CHPS VOC limits
		1 additional Elective from Division A5.5	3 additional Electives from Division A5.5
Additional Measures	Added measures shall be achieved across at least 3 categories	1 Additional Elective	3 Additional Electives

Construction Waste Diversion

○ C&D materials account for 22% of waste stream (according to 2004 Waste Characterization Study completed by State of California)



○ C&D Recyclables:

- Asphalt
- Cardboard
- Concrete
- Glass
- Metals
- Masonry
- Plastics
- Wood
- Carpet & carpet pad
- Gypsum board
- Roofing
- Soil & land clearing debris



Construction Waste Reduction, Disposal and Recycling: Nonresidential (§5.408.1 - §5.408.2)

- **5.408.1 Construction waste diversion.** Establish a construction waste management plan, or meet local construction and demolition waste management ordinance, whichever is more stringent.
- **5.408.2 Construction waste management plan. (WMP)** Where a local jurisdiction does not have a construction and demolition waste management ordinance, submit a construction waste management plan (WMP) for approval by the enforcement agency that:
 - Identifies the materials to be diverted from disposal
 - Determines if materials will be sorted on-site or mixed.
 - Identifies diversion facilities where material collected will be taken.
 - Specifies materials diverted shall be calculated by weight or volume, not both.



Construction Waste Reduction, Disposal and Recycling: Nonresidential (§5.408.1 - §5.408.2)

- **5.408.2.1 Documentation.**

Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 5.408.2 items 1 thru 4. The waste management plan shall be updated as necessary and shall be accessible during construction for examination by the enforcing agency..(See samples forms in Chap 8)



- **5.408.2.2 Isolated jobsites.** Enforcing agency may make exceptions to the requirements when jobsites are located in areas beyond the haul boundaries of the diversion facility.





- Existing Law or Regulation:
 - AB 939 (Stats. 1989, c. 1095) as amended (WMA) made all California cities, counties, and approved regional solid waste management agencies responsible for enacting plans and implementing programs to divert 25% of their solid waste by 1995 and 50% by 2000.

- Enforcement:
 - Plan Intake: Reviewer and/or plan checker to confirm that a WMP has been included with the plan submittal, that a local ordinance is cited as the method of compliance, or that an exception should be granted for an isolated job site.
 - On-Site Enforcement: Inspector should review the approved WMP or Exception (Isolated jobsite) to verify that the identified materials are being diverted as specified.



Construction Waste Reduction, Disposal and Recycling: Nonresidential (§5.408.3)

- **5.408.3 Construction waste reduction of at least 50 percent.** Recycle and/or salvage for reuse a minimum of 50% of the non-hazardous construction and demolition debris, or meet a local construction and demolition waste management ordinance, whichever is more stringent. Calculate the amount of materials diverted by weight or volume, but not by both.
 - Exceptions:
 - 1. Excavated soil and land-clearing debris
 - 2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist.



Construction Waste Reduction, Disposal and Recycling: Nonresidential (§5.408.4)

- **5.408.4 Excavated soil and land clearing debris.** 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed.



www.nngov.com/public-works/images/land3



- Existing Law or Regulation:
 - AB 939 (Stats. 1989, c. 1095): 50% diversion of all waste by 2000
 - No current law or regulation related to excavated soil and land clearing debris

- Enforcement:
 - Plan Intake: Reviewer and/or plan checker to:
 - Confirm that a construction WMP has been included with plan submittal or that an Exception 2 has been approved by the enforcing agency.
 - Review plans and look for appropriate note on plans (civil plan), WMP or CWM Worksheet that describes method of disposal of land clearing debris.
 - On-Site Enforcement: Inspector to:
 - Review the approved construction WMP or Exception 2 to verify that the plan is being followed or that an exception is being used. Inspector may ask for haul tags and/or reports from the contractor to verify compliance with 50% waste reduction.
 - Review permit set of plans and verify that the excavated soil and land clearing debris is being reused or recycled as specified on plans.

● ● ● | Construction Waste Reduction, Disposal and Recycling: Residential (§4.408.1 – §4.408.2.2)

- Construction Waste Reduction, Disposal and Recycling
 - Requires $\geq 50\%$ of non hazardous construction and demolition debris to be recycled and/or salvaged, or;
 - Compliance with local waste ordinance, whichever is more stringent.
 - Exceptions:
 - Soil and land clearing debris are exempt
 - Alternate methods or exceptions may be approved due to local constraints





Construction Waste Reduction, Disposal and Recycling: Residential (§4.408.1 – §4.408.2.2)

- 4 Lbs. per Sq. Ft. Method
 - If Net Waste / Project Area \leq 4 lbs/sf, then project is compliant with 50% waste reduction requirement

Net Waste = Waste Generated –
Recycled/Diverted



CALGreen and LEED

CALGreen (Non-Residential)

LEED (Non-Residential)

5.408.1-2	Construction waste diversion and management plan	Establish a construction waste management plan or meet local ordinance, whichever is more stringent.	M
5.408.3	Construction waste reduction, disposal and recycling	Recycle and/or salvage for reuse a minimum of 50% of non-hazardous construction and demolition debris.	Y
5.408.4	Excavated soil and land clearing debris	100% of trees, stumps, rocks and associated vegetation and soils to be reused or recycled.	n/a
5.410.1	Recycling by occupants	Provide areas for the depositing, storage, and collection of non-hazardous materials for recycling.	Y

MR 2	Construction Waste Management	Develop and implement a construction waste management plan that identifies the materials to be diverted from disposal and how.	M
MR 2	Construction Waste Management	Recycle and/or salvage for reuse a minimum of 50% of non-hazardous construction and demolition debris.	Y
	none	Soil and land clearing debris not counted in LEED MR 2 calculation	N
MRp1	Storage Collection of Recyclables	Prerequisite: Provide areas for the depositing, storage, and collection of non-hazardous materials for recycling.	Y

Source:



(c) 2010

● ● ● | Implementation

- Enforcing Agency Considerations:
 - Strength and clarify of ordinances
 - Organization capacity: Internal coordination between Building Department and Recycling Coordinator, review WMP, and enforce measures on-site
 - Local authority approved hauler program
 - Determine if local conditions warrant exemptions and identify appropriate means of alternate compliance
- Enforcement:
 - Plan/Submittal Reviews
 - Inspections



● ● ● | Implementation

- Contractor Considerations:
 - Organization capacity: develop and execute WMP
 - Identifying and estimating materials to be diverted
 - Method of recycling: On-site sorting or commingling
 - Hauler and MRF have good track record and able to provide required tracking & records
 - Subcontractors are on board
 - Clearly marked bins and checked for material accuracy
 - Tags are collected and recorded
 - Isolated site issues





C&D Ordinances

- Applicability Threshold: All, >500sf, >1000sf, >\$100K, >\$150K
- Hauler: City, Franchised Hauler, Self-Haul
- Waste Management Plan (WMP) Req'd: Yes, No
- Final Report Prior to Certificate of Occupancy Req'd: Yes, No
- Deposit: None, \$500+, depends on sf (for example, Rancho Cucamonga: \$5k for <10,000sf, \$10k for 10,000-19,999sf, \$15k for \geq 20,000sf)
- Fees: None - \$1k
- Penalty: None, deposit forfeiture, hold certificate of occupancy, misdemeanor (Town of Apple Valley)

- [C&D Home](#)
- [C&D Recycling Tools](#)
- [Materials](#)
- [Ordinances](#)
- [Specifications](#)
- [C&D Recyclers Database](#)
- [Building Products](#)
- [Sustainable Building](#)
- [Other Links](#)
- [Staff Contacts](#)

Local Government Summaries: C&D

Jurisdictions With Construction & Demolition (C&D) Ordinances

The following jurisdictions have passed a C&D Ordinance.

County: San Bernardino	
Jurisdiction	Notes
Apple Valley	<p>The town's construction and demolition (C&D) ordinance applies to all construction, demolition, and renovation projects, including town sponsored projects, that are 1,000 or more square feet and are required to submit a waste management plan (WMP) and a security deposit in an amount determined by the waste management official. The WMP shall be submitted at the same time as the permit application. No permit application for a covered project shall be accepted without a WMP. Applicants of covered projects are required to divert a minimum of 50 percent of the waste generated by the project and may meet the diversion requirements in one of 4 ways:</p> <ol style="list-style-type: none"> 1. Contract for hauling services with the town's franchised hauler to take all of the project's C&D debris to the San Bernardino County self-haul landfill diversion program. 2. Self-haul all project debris to the San Bernardino County self-haul landfill diversion program. 3. Self-haul all project debris to a construction material recycling facility. 4. Contract with a construction clean-up company to recycle at least 50 percent of the waste generated by the project. <p>Prior to final inspection of any covered project, the applicant shall submit documentation of compliance with the WMP and the 50 percent diversion requirement. If the applicant fails to submit documentation, a stop-work order may be issued and no refund of the deposit will be made.</p>
Highland	<p>The city's C&D ordinance requires a permit applicant for any building or construction permit to submit a construction waste diversion plan, which shall provide for on-site storage and regular recycling of recyclable materials, and accurate reporting. The C&D ordinance requires that reasonable efforts must be demonstrated to provide for segregation of recyclable C&D waste materials, and the planning division shall provide a list of recyclable C&D waste materials. Compliance with the construction waste diversion plan shall be a condition of any city inspection of the construction permit. For more information, see Title 8, Chapter 8.12, Section 8.12.285 of the city's municipal code.</p>
Needles	<p>The city's C&D ordinance applies to all construction and renovation projects within the city the total costs of which are, or are projected to be, greater than or equal to \$50,000, and all demolition projects whose total cost is greater than \$20,000. It also applies to all city-sponsored construction and renovation projects, whose total costs are equal to or greater than \$30,000, and demolition projects whose total cost is greater than \$15,000. Applicants for covered projects are required to complete and submit a WMP demonstrating how the project applicant will divert at least 50 percent of the waste generated by the project through one of the three options in the WMP, which are: (a) contract for hauling services with the city's franchise hauler, with all project debris delivered to a local private recycler via a landfill diversion program; (b) contract for hauling services with a private recycler via a landfill diversion program; (c) separate project debris and self-haul to diversion facilities. The applicant shall also agree, to the maximum extent feasible, to make the core materials generated thereby available for salvage prior to land-filling. Within 30 days after completion of any covered project, the applicant shall submit documentation to the WMP compliance official for the project. The WMP compliance official shall determine if the applicant has met the diversion requirement, or has made a good faith effort to meet the diversion requirement. If the applicant has not made a good faith effort to meet the diversion requirement, or fails to submit the documentation required within the 30 day time period, the WMP compliance official shall issue a stop-work order and the building official shall withhold issuance of a certificate of occupancy. Violations of the C&D ordinance shall constitute an infraction punishable by a fine not to exceed \$100 for the first violation within one year; a fine not to exceed \$500 for the second violation within one year; and a fine not to exceed \$500 for each additional violation within one year. There shall be a separate infraction for each day on which a violation occurs until the applicant achieves the diversion requirement and the material for the project has already been land-filled, the violation shall be deemed to have ceased after a period of 10 days.</p>
Ontario	<p>The city's C&D ordinance applies to all construction, demolition, renovation, additions of tenant improvements and city-sponsored projects with a total cost projected to be greater than or equal to \$50,000. Applicants of covered projects are required to submit a construction and demolition recycling plan on a city-approved form demonstrating how they will focus on diverting at least 50 percent of the waste generated by the project. In addition, in preparing the C&D recycling plan, applicants for projects involving the removal of all or part of an existing structure shall consider deconstruction, to the maximum extent feasible, and shall be issued unless the C&D recycling plan has been approved by the city. At the conclusion of the project, the issuance of the certificate of occupancy will be conditional on submittal of a report of debris that was recycled. For more information, see Title 6, Chapter 3, Article 6, Section 6-3.602 of the city's municipal code.</p>
Rancho Cucamonga	<p>The city's C&D ordinance requires all permit applicants to submit a properly completed recycling and waste reduction form with the permit application. Applicants for all covered projects, with the exception of single-family homes up to 4 units and projects with a valuation less than \$100,000, shall post a cash deposit of \$5,000 for projects of 1,000 to 9,999 square feet, \$10,000 for projects of 10,000 to 19,999 square feet, and \$15,000 for projects involving 20,000 or more square feet. Every project planned for demolition shall be made available for deconstruction, salvage, and recovery prior to demolition. All demolition projects shall divert 50 percent of the waste generated including concrete and asphalt and 15 percent of the waste excluding concrete and asphalt. Reroofing projects, construction, and remodeling projects shall divert 50 percent to 75 days following the completion of the demolition project, and again within 60 days following the completion of a construction project, the contractor shall, as a condition precedent to final inspection, submit documentation to the building department, which proves compliance with the diversion requirements.</p>
Redlands	<p>The city's C&D ordinance requires the following: (a) All demolition projects, re-roofing projects, construction projects and additions, or tenant improvement projects (other than to single-family homes) shall be issued unless a C&D recycling plan as a condition of receiving a building permit. (b) All development projects, with the exception of single-family remodeling projects, must have an approved recycling plan of the C&D waste that was recycled is required (including receipts) as a condition of issuing a certificate of occupancy. For more information, see Title 13, Chapter 13.66 of the city's municipal code.</p>

Construction Waste Management Plan

- Templates available from some local jurisdictions
- Template: *Guide to the Nonresidential CALGreen Code - Second Edition, November 2010* - <http://www.documents.dgs.ca.gov/bsc/CALGreen/Master-CALGreen-Non-Res-Guide2010-sec-ed-final-3-1-11.pdf>





CONSTRUCTION WASTE MANAGEMENT (CWM) PLAN WORKSHEET <small>Note: This sample form may be used to assist in documenting compliance with the waste management plan.</small>	CALGreen Std. – BSC-5.4-1 7-16-10
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Project Name: _____
Job #: _____
Project Manager: _____

Waste Hauling Company: _____
Contact Name: _____

All Subcontractors shall comply with the project's Construction Waste Management Plan.
All Subcontractor foremen shall sign the CWM Plan Acknowledgement Sheet.

Subcontractors who fail to comply with the Waste Management Plan will be subject to backcharges or withholding of payment, as deemed appropriate. For instance, Subcontractors who contaminate debris boxes that have been designated for a single material type will be subject to backcharge or withheld payment, as deemed appropriate.

1. The project's overall rate of waste diversion will be ____ %.
2. This project shall generate the least amount of waste possible by planning and ordering carefully, following all proper storage and handling procedures to reduce broken and damaged materials and reusing materials whenever possible. The majority of the waste that is generated on this jobsite will be diverted from the landfill and recycled for other use.
3. Spreadsheet 1, enclosed, identifies the waste materials that will be generated on this project, the diversion strategy for each waste type and the anticipated diversion rate.
4. Waste prevention and recycling activities will be discussed at the beginning of weekly subcontractor meetings. As each new subcontractor comes on-site, the WMP Coordinator will present him/her with a copy of the CWM Plan and provide a tour of the jobsite to identify materials to be salvaged and the procedures for handling jobsite debris. Each Subcontractor foremen will acknowledge in writing that they have read and will abide by the CWM Plan. Subcontractor Acknowledgement Sheet enclosed. The CWM Plan will be posted at the jobsite trailer.
5. Salvage: Excess materials that cannot be used in the project, nor returned to the vendor, will be offered to site workers, the owner, or donated to charity if feasible.

Source: *Guide to the Nonresidential CALGreen Code - Second Edition, November 2010*



CONSTRUCTION WASTE MANAGEMENT (CWM) WORKSHEET

Note: This sample form may be used to assist in documenting compliance with the waste management plan.

CALGreen
Std. – BSC-5.4-2
7-16-10

Project Name: _____
 Job Number: _____
 Project Manager: _____
 Waste Hauling Company: _____

Construction Waste Management (CWM) Plan

Waste Material Type	Diversion Method:		Projected Diversion Rate
	Commingled and Sorted Off-site	Source Separated Onsite	
Asphalt			
Concrete			
Shotcrete			
Metals			
Wood			
Rigid Insulation			
Fiberglass Insulation			
Acoustic Ceiling Tile			
Gypsum Drywall			
Carpet/Carpet Pad			

Source: *Guide to the Nonresidential CALGreen Code - Second Edition, November 2010*



CONSTRUCTION WASTE MANAGEMENT (CWM) ACKNOWLEDGMENT

Note: This sample form may be used to assist in documenting compliance with the waste management plan.

CALGreen
Std. – BSC-5.4-3
7-16-10

Project Name: _____
 Job Number: _____
 Project Manager: _____
 Waste Hauling Company: _____

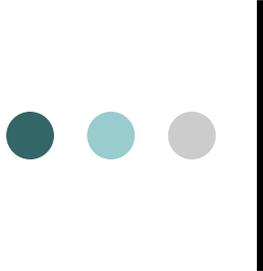
CWM Plan Acknowledgment

The Foreman for each new Subcontractor that comes on site is to receive a copy of the Construction Waste Management Plan and complete this Acknowledgement Form.

I have read the Waste Management Plan for the project; I understand the goals of this plan and agree to follow the procedures described in this plan.

Date	Subcontractor Company Name	Foreman Name	Signature

Source: *Guide to the Nonresidential CALGreen Code - Second Edition, November 2010*



WASTE GENERATION FOR RESIDENTIAL AND COMMERCIAL CONSTRUCTION PROJECTS

◆ MEDIAN AND RANGES

Data is for total waste generated, including inerts and yard waste.

NEW RESIDENTIAL CONSTRUCTION (single family)

Total Waste Generated:

- Median is 8.5 lbs per square foot
- Typical range is from 3 to 15 lbs/sq ft

NEW COMMERCIAL CONSTRUCTION

Total Waste Generated:

- Median is 4.7 lbs per square foot
- Typical range is from 2 to 6 lbs/sq ft

COMMERCIAL -- TENANT IMPROVEMENT

Total Waste Generated:

- Median is 4.6 lbs per square foot
- Typical range is from 2 to 6 lbs/sq ft

Source: StopWaste.Org's 2006 Estimating Project conducted by Matt Southworth

Estimating Materials from Construction Sites – Nonresidential New Construction

- ~ 1.87 lbs/sf (based on 350,000 sf facility)* **
- Generation rate by material (%): * **
 - Cardboard: 12%
 - Gypsum board: 5%
 - Metals: 7%
 - Wood: 46%
 - Inerts: 17%
 - Plastics & foam: 10%
 - Other: 4%



* Excludes excavated soil and land clearing debris

** Data provided by: Cesar Rios, MACTEC C&D Mgmt. Group

● ● ● | Estimating Materials from Construction Sites – Residential New Construction

- ~ 49.60 lbs/sf (for 1500 sf house)* **
- ~ 56.88 lbs/sf (for 2500 sf house)* **
- Generation rate by material (%): * **
 - Wood: 30%
 - Plaster: 20%
 - Concrete: 10%
 - Gypsum board: 10%
 - Plastic, Brick, Land Clearing Debris: 2% each
 - Asphalt, Fiberglass, Other Paper, Tile: 1% each
 - Cardboard: 8%
 - Roofing: 5%
 - Masonry: 4%
 - Metal: 3%

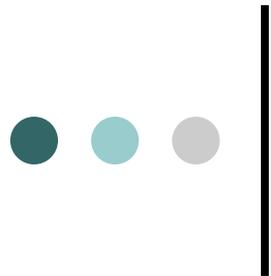
* Excludes excavated soil and land clearing debris

** Data provided by: Cesar Rios, MACTEC C&D Mgmt. Group



Facility Performance

- C&D Facility Survey conducted by County of San Bernardino Solid Waste Management (Winter 2011) – 60+ facilities
 - Do you have a scale on site?
 - If no, how are materials tracked?
 - What is the % of materials recycled?
 - Can you provide documentation on recycling for LEED and non-LEED projects?
 - Is there a fee for documentation?
 - Do you put tonnage on the receipt?
 - What is the end use of this recycling?



Representative Facility Performance

The Carpet Recyclers
Fullerton, CA 92831
Carpet & padding
100% Recycled/Diverted

Engelauf Construction Specialty, Inc.
Riverside, CA 92509
Asphalt, Concrete, Mixed loads
100% Recycled/Diverted

Coachella Valley Compost Facility
Indio, CA 92221
Greenwaste, wood
100% Recycled/Diverted

Inland Regional MRF
Colton, CA 92324
Asphalt, concrete, appliances, dry
wall, soil
95% Recycled/Diverted

Colton Iron & Metal
Colton, CA 92324
Metals only
100% Recycled/Diverted

● ● ● | On-Site Strategies

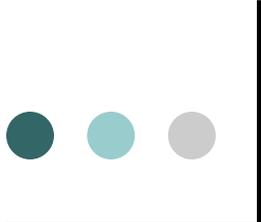
- Source separation
 - Better recycling/diversion rate



- Co-mingling



Source: <http://www.wbdg.org/resources/cwmgmt.php>



Diversions Rates

Project Name	Project Type	Project Length (to date)	Project Jurisdiction	Total Tonnage	% Trash	% Diverted
Murrieta Mesa High School **	New Construction (High School)	22 months (completed)	Murrieta	1629.34	20.00%	80.00%
Prologis ***	New Construction (Big Box Retail)	Completed	Redlands	1370	17.97%	82.03%
Prologis ***	New Construction (Big Box Retail)	Completed	San Bernardino	336.5	8.32%	91.68%
Timberwolff *	New Construction -TI (Retail)	6 weeks (completed)	Victorville	5.6	73.75%	26.25%
Highland Partnership *	New Construction (Training Center)	2 months (ongoing)	Apple Valley	41.16	4.93%	95.09%
Lennar Communities ***	New Construction (Res Tract Homes)	Completed	San Bernardino	6	16.67%	83.33%
Lennar Homes ***	New Construction (Res Tract Homes)	Completed	San Bernardino	2600	17.69%	82.31%

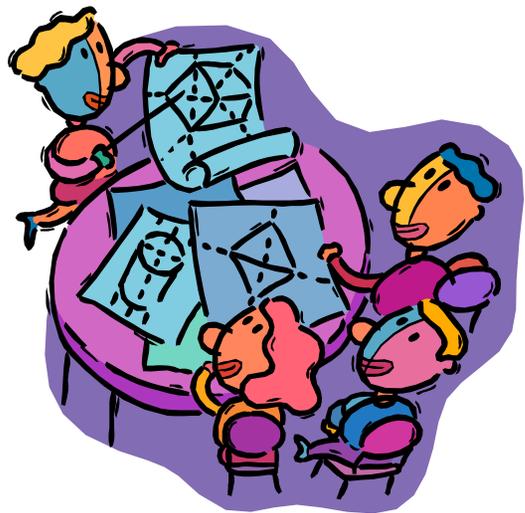
* Data provided by Steve Bradshaw, Burrtec Waste Industries

** Data provided by Steve Glynn, Waste Management

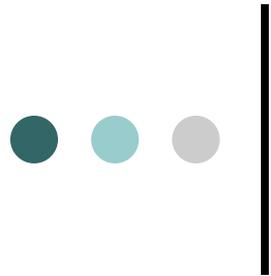
*** Data provided by County of San Bernardino Solid Waste Management



More Implementation

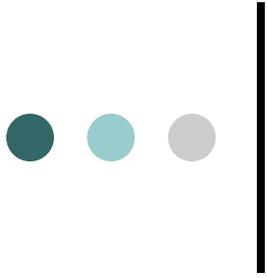


- Local Regulations & Infrastructure Roundtable Discussion:
 - Group and facilitated discussion on local ordinances, issues with implementation, etc.



Resources

- *County of San Bernardino Construction & Demolition Waste Recycling Guide & Directory:* www.sbcounty.gov/dpw/solidwaste/pdf/CandD_Recycling_Guide.pdf
- SBCountyMax Waste Exchange: www.calrecycle.ca.gov/CalMAX/Ad/default.aspx?Partner=SBCountyMAX
- CalRecycle: www.calrecycle.ca.gov
- StopWaste.org: www.stopwaste.org Alameda County



Q&A

CALGreen & Construction Waste Diversion

Presented by:
A. Bambi Tran, Assoc. AIA, LEED AP, GA, MRED
doingitgreen@gmail.com
202-352-4563 (mobile)