



## Effectively Managing Construction & Demolition Debris, San Luis Obispo!

### Why Recycle C&D Materials!

In 1989 the California State Legislature passed **Assembly Bill 939** (“AB 939”). AB 939 mandates that each municipality divert (i.e. **recycle**) 25% of its **waste stream** by 1995 and **50% by the year 2000**. The City in order to meet this goal has over the past decade implemented numerous recycling programs, including, Residential, Commercial and **Construction Debris**. The goal of these programs is to divert the bulk of the materials generated from projects within the City of San Luis Obispo from landfill and thus, extend the lifespan of our local landfill (i.e. Cold Canyon). By extending the lifespan of our local landfill we can avoid issues, such as, sighting and permitting a new facility and other capital expenditures.

**Construction & Demolition (“C&D”) material represents a significant percentage of the municipal solid waste stream**, with current estimates at 25 percent of the total tonnage. Its reduction will help meet the State-mandated diversion goal of 50 percent and is **required by City Ordinance**.

Information provided by...



### Blue Card Sign-Off's

Before requesting a Blue Card Sign-Off for the project, be sure to have copies available of all construction and pre-construction related debris (i.e. landfill materials and recycle materials) receipts documenting all materials removed from the site. Please note that the figures contained herein are only to be used as a guide in deriving estimated numbers for the completion of Section 2 of the Plan prior to application approval.

For reference the following provides information regarding materials generated by weight for two types of construction from project start to completion:

#### Custom New 2000 sq. ft. Home

2,000 sqft =	apx 9.31 tons of debris
Mixed	- 3.77 tons
Green waste	- 0.34 tons
Inerts	- 1.40 tons
Miscellaneous debris	- 0.02 tons
Metals	- 0.01 tons
Lumber	- 0.86 tons
Cardboard	- 0.07 tons
Landfill	- 2.86 tons

#### Commercial Tenant Improvement

2,000 sqft =	apx 10.91 tons of debris
Mixed recyclables	- 6.19 tons
Green waste	- 0.48 tons
Inerts	- 0.94 tons
Miscellaneous debris	- 0.01 tons
Metals	- 0.21 tons
Lumber	- .072 tons
Cardboard	- 0.01 tons
Landfill	- 2.91 tons

### Problems and/or Questions?

If you should require additional information and/or have questions in general, please contact your City of San Luis Obispo's Utilities Conservation Office Representative at **(805) 781-7213** and we will be glad to assist you.

### C&D Waste Generation Guide!

Type of Project	Projections by Project Type	Apx. Waste Generated
<b>Commercial Additions</b>	Commercial Demolition	49.00 lbs / sq ft
Commercial New Construction	Commercial Tenant Improvement	63.79 lbs / sq ft
Commercial New Construction	Commercial Tenant Improvement	8.26 lbs / sq ft
Commercial Tenant Improvement	Commercial New Construction	10.72 lbs / sq ft
<b>Multi-Family Residential Additions</b>	Multi-Family Res. Demo & Other	22.13 lbs / sq ft
Multi-Family Res. New Const	Multi-Family Res. Remodel	51.00 lbs / sq ft
Multi-Family Res. New Const	Multi-Family Res. Remodel	17.09 lbs / sq ft
Multi-Family Res. Remodel	Single Family Res. Demolition	7.25 lbs / sq ft
<b>Single Family Residential Additions</b>	Single Family Res. Demolition	37.00 lbs / sq ft
Single Family Res. Demolition	Single Family Res. New	51.03 lbs / sq ft
Single Family Res. New	Single Family Res. Remodel	8.73 lbs / sq ft
Single Family Res. Remodel		46.61 lbs / sq ft

### Conversion Factors:

Asphalt	1940 lbs / cu yd	0.97 tons / cu yd
Brick	2430 lbs / cu yd	1.21 tons / cu yd
Cardboard	100 lbs / cu yd	0.05 tons / cu yd
Concrete	2370 lbs / cu yd	1.18 tons / cu yd
Dirt	2660 lbs / cu yd	1.33 tons / cu yd
Drywall	500 lbs / cu yd	0.25 tons / cu yd
Metals	150 lbs / cu yd	.075 tons / cu yd
Wood	400 lbs / cu yd	0.20 tons / cu yd

**On-Site Blue Recycling Wheelers** – Attribute 25 lbs per week per service

## **City Ordinance**

In order to achieve the State Mandate, the City of San Luis Obispo passed a Construction and Demolition Debris Recycling Ordinance (No. 1381, Chapter 8.05). The **Ordinance applies to all construction and renovation projects with a valuation of \$50,000 or higher** and/or for **projects equal to or greater than 1,000 square feet**. Projects that fall under the Ordinance must recycle at least 50% of the waste generated from the project. **Failure to meet this goal may result in a civil penalty of 2 percent of the project valuation.** Please note that **multi-phased projects may require multiple submittals.**

## **Compliance is as Simple as 1,2 & 3!**

All Building Permit Applicants must complete and submit the “Construction & Demolition Recycling Plan and Disposal Report” to the Building Department at 990 Palm prior to the issuance of a building permit. The completed recycling plan must be imprinted on the Plan Set upon submittal to the City. A Completed and Approved Report must be on file with the City before construction begins. For most projects applicants must **complete sections numbered 1, 2 and 3.** Applicants who elect to use an Integrated Waste Management Authority certified roll-off company do not have to complete Section 2 of the form, since these companies automatically recycle as a standard business practice. For more information please call (805) 781-7213.

Upon completion of the project applicants must **submit copies of all disposal and recycling weight tickets** for the project to the City Utilities Conservation Office at 879 Morro along with Section 3 of the “C&D Recycling Plan and Disposal Report” completed. The completed Report along with copies of all weight tickets must be **submitted to the City prior to consideration of a Blue Card sign-off.**

## **Completing Section 1**

Section 1 of the Application is rather simple and just requires the basic information, such as, Building Application No., Owners Name, Contractors Name, **Project Square Footage**, Overall Project Cost, APN and etceteras.

## **Completing Section 2**

Section 2 of the Application form requires the Applicant to estimate the amount of waste to be sent to landfill and **estimate the amount of waste to be diverted by reuse or recycling by material type.** The information required for completing this section of the Application are only estimates and should be calculated based upon experience. A guide to the amount of material generated by project for your reference is included on the back of this pamphlet. **This section does not need to be completed if an Integrated Waste Management Authority certified roll-off company is used.**



## **Calculating Estimated Diversion**

To calculate the estimated diversion rate divide the total diversion tonnage by the sum of the landfill and diversion tonnages and then multiply by 100.

$$\text{Diversion Rate} = \frac{\text{diversion}}{\text{diversion} + \text{landfill}} \times 100$$

If the estimated diversion rate is less than 50% submit an explanation as to why this project cannot achieve the goal. After completing the form, and any other applicable information, **imprint the recycling plan on all building and/or demo plans** to be submitted to the building department for approval, plus the original form.

## **Completing Section 3**

All Applicants must complete Section 3 of the “Construction & Demolition Recycling Plan and Disposal Report” **prior to consideration of a Blue Card Sign Off.** The numbers used to complete this section of the report can be found on the actual disposal and recycling weight tickets from the landfill, material recovery facility and/or from the roll-off company. To calculate the diversion rate for the project use the equation in section two herein. Next, fill in the actual disposal and diverted tonnages for each material and **attach copies of all receipts (weight tickets), including those from subcontractors.** Submit the completed form with the attached receipts to the Utilities Conservation Office at 879 Morro, San Luis Obispo. **This information is required prior to consideration of a Blue Card Sign Off.**

## **Submitting the Completed Report**

Again, submit the completed form with all debris removal receipts attached, to the Utilities Conservation Office City of San Luis Obispo at 879 Morro Street, San Luis Obispo. We are located between Palm Street and Mill Street in Downtown San Luis Obispo. Offices are open Monday through Friday, excluding holidays, 8:00 am to 5:00pm.

## **What C&D Materials To Recycle?**

Recyclable Construction and Demolition (C&D) debris includes concrete, vegetation, asphalt, wood, drywall, metals, cardboard, and many miscellaneous and composite materials. Please **request that your hauler recycle all materials that can be recycled.**

## **Changes or Revision to the Plan**

Any changes (i.e. Different Hauling Company) or deviations to the Approved “Construction & Demolition Recycling Plan and Disposal Report” would require a re-submittal accompanied with an additional fee to the City of San Luis Obispo. August 2007