

A Case Study

MULCH

Rubicon Landscape Services

Based in Richmond, California, Rubicon Landscape Services has provided landscape installation and maintenance to many Bay Area clients for 27 years. The landscape service is one of three business enterprises operated by Rubicon Programs, a non-profit provider of significant training and employment opportunities for low income, homeless and disabled people. Rubicon's Landscape Services department employs a staff of 80 employees who deliver quality services and responsiveness to their customer's needs.

Rubicon Landscape Services, under the management of Director Don Waxman, initiated a Green Waste Recycling Project in the fall of 2001. The goals of the project are to process and reuse 90% of all plant debris generated by their operations (currently 675 tons/year). They also offer recycling services to new customers that include custom processing of plant debris, mulch sales, on-site spreading of mulch, pick-up and removal of plant trimmings and fire break cutting and brush clearing. Offering these services enables Rubicon to divert additional organic materials from the landfill and create 3 – 5 full time jobs for disadvantaged Bay Area residents.

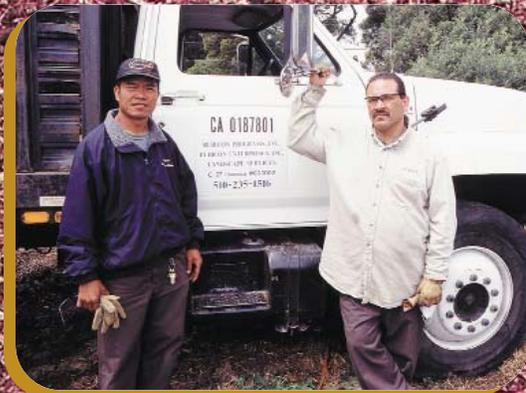
Mulching plant debris...

Means chipping or shredding plant trimmings to spread evenly over the surface of the soil to enhance the growth of plants and the appearance of the landscape.

What does it take for mulching to work?

Rubicon feels that successful mulching of tree prunings, branches and leaves depends on:

- Offering multiple services to customers to efficiently use the equipment.
- Producing custom mulches.
- Choosing the proper equipment, including a machine loader.
- Simple but daily maintenance of equipment.
- Using chips on-site as mulch whenever possible.



THE BOTTOM LINE: ANNUAL DISPOSAL COSTS CUT BY \$45,000



“Our customers appreciate the way the mulch creates an improved natural look. They also find out it is very durable and stays in place very well. That is when they begin to discuss mulching additional areas.”

— Larry A. Brunink, Sales Manager, Rubicon Landscape Services

ADDITIONAL BENEFITS

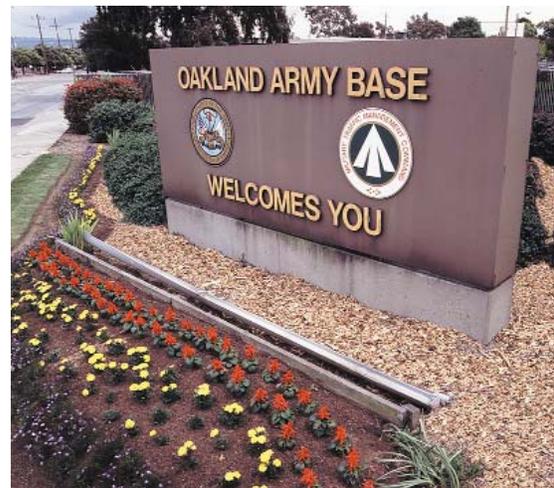
Reducing labor

- 23 cubic yards of branches, leaves and/or tree prunings can be chipped in 1 hour!
- With experience and a grapple loader, only 2 1/2 hours of labor are required to run the chipper for 1 hour.
- If the plant debris were hauled to the landfill or transfer station, the labor required to dispose of 23 cubic yards would likely exceed 2 1/2 staff hours, though it would depend on the size of the truck used in hauling the material.



Avoiding the cost of purchasing mulch

- 23 cubic yards of plant debris will “chip down” to almost 5 yards of mulch.
- Rubicon Landscape Services has spent as much as \$2,500 per year on purchasing mulch.



Cutting back on plant waste

- In 9 months of use, the chipping operation diverted 360 tons of plant material – more than 7,000 cubic yards.

Using the mulch on site promotes healthy plants and:

- Cuts annual weed growth by as much as 90%, further reducing labor costs.
- Decreases the costs of buying and applying herbicides.
- Reduces the need for trimming grass around trees and poles.
- Conserves water and cuts the cost of irrigation.

“The chipper grinder is relatively easy to maintain, requiring daily greasing and periodic tightening of certain bolts.”

— Lowel Young, Operations Manager at Rubicon’s Treasure Island site

“We feel that chips produced by the chipper grinder are very useful as a mulch product. They are being used on our maintenance sites as well as several of our landscape installation projects.” — Don Waxman, Director of Rubicon Landscape Service

Project Description

Before initiating the mulching program, Rubicon Landscape Service was spending \$45,000 per year on landfill disposal fees for the green waste generated by their landscape operations. In mid-August of 2001, Rubicon purchased a Sundance Kid II chipper grinder. The machine easily grinds all types of plant materials, including palm fronds.



At first, Rubicon staff tried to load all the plant trimmings into the chipper by hand. It quickly became apparent that the staff would not be able to keep up with the grinder. A Bobcat with a grapple bucket is now used to load the machine more efficiently.

After the plant debris is processed into mulch, the chips are either left on site or transferred back to a main storage yard. Rubicon Landscape Services is no longer spending \$2,500 per year for purchasing mulch: they make their own!

Once in full swing, the mulching program will reduce Rubicon Landscape Service’s annual disposal fees for plant debris to less than \$5,000. Rubicon is planning to serve additional customers in managing their green waste materials and market the mulch that is produced with the goal of being cost effective while also providing employment training opportunities to disadvantaged men and women.



EQUIPMENT SPECIFICATIONS

- Sundance Kid II Grinder:
- 18 tons/hour plant debris capacity
- 100 hp John Deere 4045T Diesel Engine can grind wet and stringy type material.
- Auto Cycle hydraulic drive feeding system
- Easily transported with 3/4 ton pickup
- Cost: \$54,500 includes shipping



Alameda County Waste Management Authority
Alameda County Source Reduction and Recycling Board
www.stopwaste.org

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About the Agency

The Alameda County Waste Management Authority & the Alameda County Source Reduction and Recycling Board is an integrated public agency whose mission is to provide the most environmentally sound waste management program for the people of Alameda County. The Authority and the Recycling Board produced this case study to aid landscapers in the reuse and reduction of plant debris.

For More Information Ask about our Free Resources:

- A Landscaper's Guide to Mulch
- A Landscaper's Guide to Grasscycling
- Una Guia del Jardinero para Reciclar Pasto
- Ask Your Lawn Care Professional About Grasscycling for Beautiful, Lush, Healthy Lawns

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**Call our composting hotline: 510-444-SOIL
or visit our website: www.stopwaste.org**

