

City of Modesto

Public Compost Production Program Study

Introduction

The City of Modesto operates its own composting facility, “Modesto Composting.” Through their composting program the city is able to divert green material and biosolids from disposal.

Program Summary

Feedstock for the compost facility includes yard trimmings and brush from the city’s street collection program. Residents have been provided with a 90-gallon container for weekly pickup of green material, and may also put out a specified amount of large green material at the curb, or in the alley, once per month. The facility also receives biosolids from their wastewater treatment facility.

The facility produces two compost products through a windrow process:

- Mo-Gro Pro is a “clean green” compost made from landscape trimmings.
- Mo-Gro Magic is a biosolids/ yardtrimmings co-compost.

Mo-Gro Pro is sold in bulk to landscapers and farmers. Mo-Gro Magic is sold in bags. In addition, it is sold in bulk to other bagging operations for sale under their label. In addition, the city uses some of the compost at parks, on median strips, and in beautification projects. As a result of the frequent requests for their compost product, the city has had to establish a waiting list for the compost.

To help ensure that their customers get the right quality compost product for their end use, the city developed compost procurement specifications (see reverse). The specifications explain the different uses for compost, and the characteristics that the compost must meet before being applied as a fertilizer, topsoil, or soil amendment.

Key Benefits

Modesto’s compost program has enabled the city to save more than \$1.4 million on the cost of landfilling their organic materials based on the landfill disposal rate of \$30 per ton. The city also generates revenues through the sale of the compost products, further offsetting its operating costs.

Modesto’s program also helps divert significant tonnage from the landfill; thereby saving landfill space and helping the city meet its AB 939 landfill diversion requirements. Last year over 31,000 tons of material was diverted from disposal.

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Modesto Compost Specifications

1. Native topsoil shall be the existing surface layer of soil on site.
2. Fertilizer shall be determined from soils analysis results.
3. Organic amendment shall be “Mo-Gro-Pro” or organic amendment conforming to:
 - a. Physical properties: 95–100 percent passing, sieve size 6.35mm; 80–100 percent passing, sieve size 2.38mm; and 0–30 percent passing, sieve size 500 micron.
 - b. Chemical properties: Nitrogen content (dry weight basis) 0.4-0.6 percent; iron content minimum .08 percent dilute acid soluble. Dry weight basis soluble salts- maximum 3.5 millimeters/centimeter at 25 degrees Celsius as determined by saturation extract method; ash- 0-6.0 percent.
4. Imported topsoil shall be an imported fertile, friable soil of loamy character containing a normal amount of organic matter. It shall be obtained from well-drained stable land and shall be free from refuse, roots, heavy or stiff clay, and stones larger than 1 inch in size. Soil shall contain the following percentages: sand- between 45 and 52; silt- between 26 and 50; clay between 6 and 26. Sands shall range from 2 to .05 millimeters in diameter; silt from .05 to .002 millimeter, and clay less than .002 millimeters.
5. Soil amendment shall be an organic material composted from wood and plant material under optimum conditions to destroy viable weed seeds and pathogens. Final product shall be screened to one-half inch and cured to stabilize.
6. Soil amendment shall be dark brown, fine texture and shall have a minimum of 1 percent available nitrogen content (percent dry weight). Submit complete analysis of the proposed soil amendment to the city engineer for approval. Prior to amending soil, the landscape contractor shall review the results of the soils test and report recommendations to the city engineer.
7. The soil reports recommendations shall take precedence over the minimum amendment and the fertilizer application rules specified on the plans only when they exceed the specified minimums.
8. Top dress shall be Mo-Gro-Pro or approved equal: Top dress shall be wood chips and/or plant material ground and composted for at least one month at moisture levels of 30-50 percent and temperatures of 130-150 degrees F. The product shall be dark brown throughout, screened at a maximum of 1” to remove all contaminants, such as plastic or other debris and with a minimum of 1 percent nitrogen to prevent nitrogen deficiency in plant material. Material to be applied at a minimum layer of 3 inches.