

Best Management Practices: Water Quality



Will Bakx

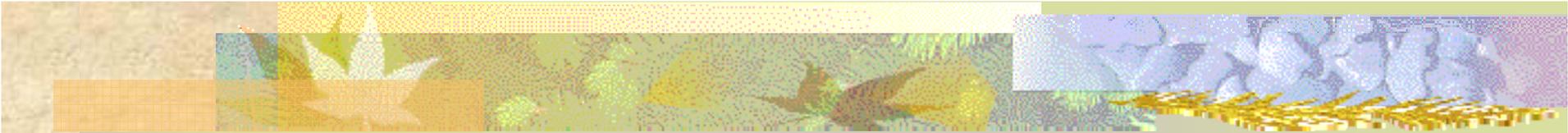
Co-Owner/Soil Scientist

www.sonomacompost.com



1,200,000 Tons Diverted Since 1993
To Feed the Soils of Sonoma County





The Numbers

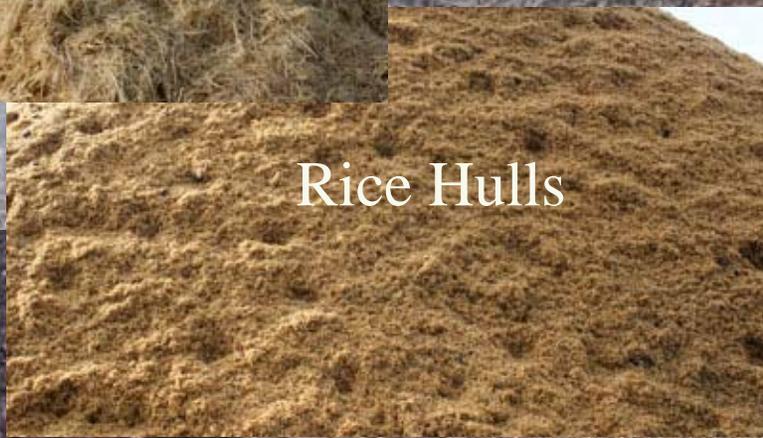
- 90,000 Tons per Year
- 235 Tons/Day Yard Debris (\$34.10/Ton)
- 15 Tons/Day Wood (\$27,60/Ton)
- Vegetal Food Discards in Green Can
- 2% Food Discards Incorporated
- 4% Yard Debris Remaining in Waste Stream
- 21.4% Food Discards Remaining in waste:
80,000 Tons (\$101.50/Ton)
- 24 Acre Compost/Processing Site (incl. ponds)

Materials Accepted

- Yard debris
- Wood Scraps
- Vegetative Food Scraps
- Agricultural Byproducts
- Meat, Bones, Dairy
<10%



Feedstock/Additives



Site Overview



Site Surface



Drainage Ditch



Sediment Trap



Sediment After Storm



Second Trap



Primary Pond



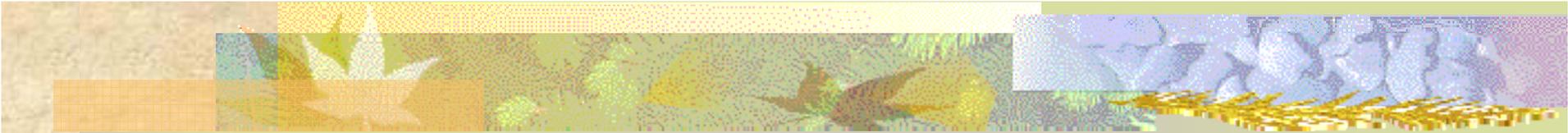


Secondary Pond



To Tertiary Pond, To Stemple Creek

The image shows a wide, grassy valley with a small, shallow pond in the center. A dirt road or path runs through the valley, leading towards a line of trees in the distance. In the foreground, there is a pile of gravel or rocks with a corrugated metal sheet leaning against it. The overall scene is a natural, rural landscape.



Compost Water Requirements

- Active: 40-60% Moisture
- Curing: 30-40% Moisture
- Starting Moisture: Obtain Optimum
- Maintenance Water
- Water Management

Moisture Addition



No Water Is Added During the Rainy Season

Moisture Addition on Windrows:

Dry Season



Winter Shape



Turning the Windrows





2 Days Before or After Rain Event

Screening



Keep Pad Clean

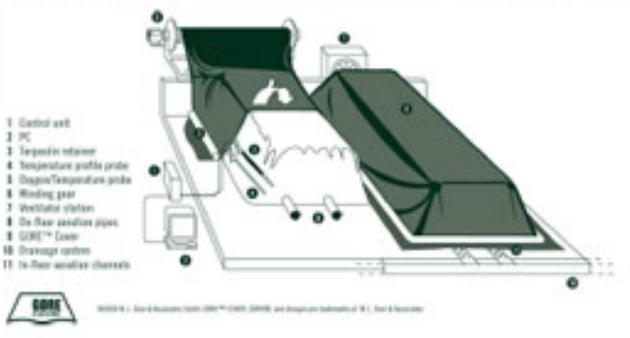
Yes, We Sweep





Alternatives

- Aerated Static Piles (ASP)
- Anaerobic Digestion
- Conversion Technologies
- Incineration
- Enclosed Facilities
- Landfill/Alternative Daily Cover (ADC)



Aerated Static pile
 Cedar Grove, Everett WA



Anaerobic Digestion

BioFerm



Conversion Technology

Australia



Incineration



Enclosed Facility

Santa Rosa, CA



Landfill/Alternative Daily Cover

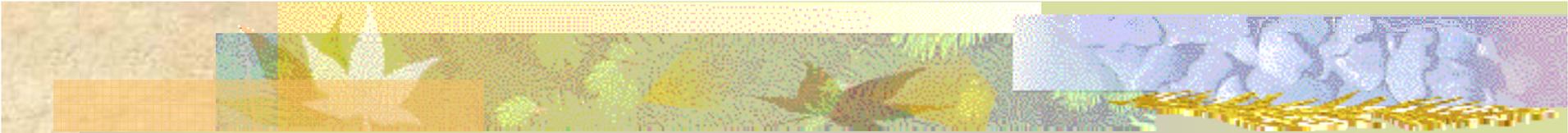
Finished Products



The Market: **All Sold**

- SCC Retail Site
- Agriculture
- Landscape Industry
- Backyard Gardeners
- Soil Dealers
- Nurseries
- Parks and Recreation
- Schools





Compost Benefits

- Reduced Fertilizer Needs
- Immobilized Nutrients: Slow Release
- Reduced Pesticide Use
- Improved water holding capacity
- Increased Cation Exchange Capacity
- Improved Soil Structure
- Reduced Erosion



Closing Remarks

- Compost industry plays an important role in waste diversion, GHG reduction, water conservation, nutrient cycling, erosion control, etc.
- There is room for improvement in water management
- Regulation do not stand by themselves, there are other agencies: Keep the viability of the industry in mind
- Keep open dialogue, including dialogue between agencies: Integrated approach
- Look at the full picture including benefits