

A CASE STUDY OF THE GREENVILLE COUNTY MULCHING PROGRAM

By

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Program: Yard Waste/Mulch Program

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Program Start-up: July 1, 1995

BACKGROUND:

Yard waste was banned from landfill disposal on May 27, 1993. An intergovernmental agreement was enacted between the City of Greenville, the Greater Greenville Sanitation (GGS) and Greenville County to jointly compost yard waste at the City of Greenville Landfill. This agreement lasted until July 1, 1995. All yard waste within the County was transported to GGS where it was processed through an in-line grinder and discharged directly into a 75-yard transfer trailer and transported the material to the City of Greenville's landfill. The material (in theory) was then fed into a tub grinder, placed in a windrow, and used for daily cover on the landfill. In reality, most of the material was piled into static piles directly from the transfer trailers, covered with soil and remains there to this day. In July 1995, the City of Greenville closed their landfill and Greenville County became the only lined Sub Title D landfill within the County.

PROJECTION DESCRIPTION:

In July of 1995, our yard waste program began much like the City's program. Yard waste came into our facility loose or in large chips after being initially processed at the GGS facility. We in turn processed that material through the W.H.O. grinder we received from the City and attempted to windrow the material. We soon realized that it was impossible to grind and compost the amount of yard waste we were receiving with one employee, a small windrow turner and one tub grinder. We readdressed the plan and determined that grinding the yard waste into mulch and giving it away to citizens would be more economical, required no additional employees and provided some much needed goodwill.

Greenville County receives an average of 123 tons/day (TPD) on a 6-day work week with an average of 181 TPD during leaf season. To address this volume of yard waste we purchased a 1260 Diamond Z tub grinder and a grapple attachment for our rubber tire loader. The grapple attachment enhanced the productivity of our loader significantly. The Diamond Z tub grinder easily handles 40 tons per hour. These improvements meant that one operator can keep up with the waste stream, perform all maintenance and load mulch customers.

Yard waste received between March 1 and November 30 is ground into mulch and given away to citizens (with marginal plastic contamination). We provide complimentary loading on Thursday, Friday and Saturday from 9:00 - 12:00 and 1:00 - 3:00. We load an average of 200 customers each day. However, during the winter months (and when plastic bag contamination increases) we continue to grind and stockpile the mulch as the demand for mulch drops off. The stockpile consists of 2' layers of mulch sandwiched between 1' layers of soil. When the season is over, we cap the entire stockpile. When needed, the pile will be excavated mixed with a kiln dried sludge (1:1 ratio) and used for daily cover on the landfill. We receive 200 tons/day of kiln dried sludge from Western Carolina Regional Sewer Authority at no charge to augment our supply of daily cover material.

PROJECT UPDATE:

- ☛ The total amount of yard waste processed between July 1, 1995 and July 1, 1998 equals 116,184 tons.
- ☛ The total amount of mulch given away to citizens equals approximately 40,000 tons.
- ☛ Total amounts used to mix with kiln dried sludge for daily cover equals 30,000 tons.
- ☛ Total amount stockpiled, for future use as landfill cover, equals 45,000 tons.

RECENT EXPANSIONS AND EXPECTATIONS:

We improved the loading and unloading area with the addition of a 150' x 150' concrete pad. This improvement has reduced tip wear, reduced the staff hours dedicated to replenishing stone and improved customer relations. We also began an aggressive campaign to advertize our free mulch program. Landfill cover was the primary user in FY96. However, during the last two years, outgoing mulch tonnages have kept pace with incoming tonnages between March 1 and November 30. In an effort to improve the quality of our product, we implemented mandatory debagging for all yard waste received between March 1 and November 30.

YARD WASTE REDUCTION:

Our incoming yard waste tonnages increase every year because Greenville County is a high growth area. The Solid Waste Division is continually working to educate its citizens about the benefits of composting. We have established a compost garden at the Roper Mountain Science Center. The facility is maintained by Master Gardeners and school children routinely tour the garden. Classes in composting are periodically provided and compost bins are sold annually at a reduced price to citizens.