



The Earth Flow Can Save You Money

If you are paying more than \$30/ton to dispose of organic wastes and disposing of more than 3 tons/day, You could be saving your organization money right now using the Earth Flow Composting System

The Earth Flow is an automated composting system that turns your organic wastes (e.g., food waste, paper wastes, landscape wastes, animal manures) into a valuable soil amendment for your landscapes. The Earth Flow's integrated mixing, aeration and moisture systems optimize the thermophilic composting process.



Earth Flow - Stainless Steel Vessel

The following is an illustration of how the Earth Flow composting system could save your organization money in off-site disposal and soil amendments costs.

For this financial analysis, we focused on the Earth Flow EF-5010 Stainless Steel System (50' x 10'). This system features a stainless steel vessel, greenhouse roof enclosure and a completely self-contained composting environment.

This analysis assumes the equipment is financed over 5 years with an interest rate of 8%. It also assumes a 1:1 recipe by weight for food waste/landscape waste mixes.

Results of Analysis

Table 1 presents total costs per blended ton of inputs (assuming a minimum of 3 tons/day of biodegradable inputs and a 14-day retention).

Table 1. Earth Flow Cost Breakdown

Estimated Costs (based on a 5-year depreciation)	EF-5010 Stainless Steel
Capital Equipment	\$30/ton
Infrastructure, Freight, Installation, Set-Up	+ 5/ton
Financing Charges (8% interest over 5 years)	+ \$9/ton
Subtotal:	\$44/ton
Operations & Maintenance Costs	+ \$15/ton
Less Soil Amendments Savings/Sales	- \$15/ton
Total Costs:	\$44/ton

Table 1 demonstrates that the Earth Flow can be a smart financial investment under the following circumstances:

- Your avoidable disposal costs (costs divertible to composting instead of disposal) are >\$30/ton **and**
- You have more than 3 tons/day of total biodegradables (including bulking agent, e.g., landscape waste).

Headquarters

5350 McDonald Ave.
Bainbridge Island, WA 98110
Tel 206.319.7102

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Table 2 shows how these total costs decrease as the throughput in the Earth Flow is increased and material is transferred into secondary aerated pile composting under hoop house (these costs are included in results). If you have larger volumes to compost, total costs on a per ton basis could drop to as low as \$30/ton. Site-built versions of the Earth Flow could further increase your savings (contact Green Mountain Technologies to learn more).

Table 2. Impact of In-Vessel Retention Time on Total System Costs

Total to Inputs per Day to EF-5010	3 tons/day	4 tons/day	5 tons/day	6 tons/day
Retention Time in Earth Flow	14 days	10 days	7 days	5 days
Total Costs/Ton	\$44/ton	\$39/ton	\$35/ton	\$30/ton



Table 3 provides examples of projected annual savings for different disposal costs. For instance, if your current avoidable disposal costs are \$40/ton and the Earth Flow total costs are \$30/ton, your savings/ton would be \$10/ton and your projected annual savings would be \$10,950.

Table 3. Projected Annual Savings by Disposal Cost (assuming Total Costs of \$30/ton, 3 tons/day of feedstocks)

Current Disposal Costs/Ton	\$40/ton	\$50/ton	\$60/ton	\$70/ton
Projected Savings/Ton	\$10/ton	\$20/ton	\$30/ton	\$40/ton
Projected Annual Savings	\$10,950/yr	\$21,190/yr	\$32,850/yr	\$43,800/yr

Notes on Analysis

- Assumes retention times in the Earth Flow of less than 14 days require that the compost would exit the Earth Flow and go into a second-stage aerated pile composting within a hoop house.
- Assumes potential savings in costs are based on the aggregate disposal costs of all biodegradable inputs. In particular, bulking agents may have different disposal costs than primary feedstocks.
- Assumes the organization sells the finished compost or uses the compost on-site to avoid soil amendment costs. We conservatively estimate the value of the compost at \$15 per blended ton of inputs (or \$15/yard of finished compost).
- Assumes systems are run according to Green Mountain Technologies best management practices.
- Features included complete odor control and leachate catchment.
- Infrastructure and set-up costs do include concrete pad, electrical hook-up, freight, crane delivery, installation, testing & commissioning, training, travel expenses and on-going customer service.
- Operations and maintenance costs include operations labor, maintenance labor and materials, electrical/water usage and annual product testing.
- Costs do not include land, permitting, road building, excavation, auxiliary structures, grinding or screening.

About Green Mountain Technologies

At Green Mountain Technologies, we're all about composting. Since 1992, we've been dedicated to helping forward-thinking organizations reduce their environmental footprint, save money and produce top quality compost. We are committed to making composting an easy, affordable and successful undertaking for organizations of any size. We are passionate about composting because it saves money, eliminates waste, builds soil fertility, protects water and reduces greenhouse gas emissions.

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www.compostingtechnology.com