### MATERIAL FLOW DIAGRAM

**Fiscal Year 2007**

**Stream No.** | **Material Description** | **Sources of Data** | **Total (tons/yr)** | **Comments**
--- | --- | --- | --- | ---
0 | Construction & Demo Debris Private Export | Licensed Collector Reports under ER 92-99 | 102,786 | Not County-managed and not eligible for recycling
1 | Yard Waste Source Reduction | Calculated w/ estimates & measurements | 85,024 | 17.5% of MSW less leakage less yard waste facility tons
2 | Recycled via non-County Facilities | Collector, Processor, Business & Self-Hauler Rpts. | 209,762 | Filtered to avoid double-counting
3 | County Recycling Facility Material Sales | County TS & MRF Scales, Outbound | 118,546 | Outgoing to Market from County Recycling Center
4 | Mulch Loaded Out From TS | County Transfer Station (TS) Scale Records | 21,658 |Scaled Out As Taken to Mulch Preserve Locations
5 | Non-Processibles Recycled"** | County TS Scale Out Records | 1,965 |
6 | Non-Processibles Land filed"** | County Trans. Stat'n. & Covanta Scale Records | 94,679 |
7 | Loaded on Rail to RRF (MSW burned) | Covanta Scales as Loaded | 550,602 |Total Tons Loaded on Rail to RRF Net of 7a
7a | Loaded on Rail to RRF (C&D Burned) | County Transfer Station (TS) Scale Records | 42,963 |In-Bound C&D less Outbound Non-Processibles Landfilled
7b | By-pass (Accepted Processible Land filed) | County TS Scale Out Records | - |
8 | Refuse Disposed Out of County | Audited 6-Mo. Hauler Reports | 159,602 |Private Sector MSW Collection not delivered to CountyTS
9 | All Incoming Leaves and Grass | Compost Facility & TS Scale Records | 77,280 |Includes 8,247 to Backup Composters
10 | Composting Residue to RRF | Covanta Scale Records | 15,916 |
11 | Ferrous recovered at RRF | Covanta Scale Records | 15,916 |
12 | Ash Loaded to Ash Recycling Contractor | No ash recycling at this time. | - |
13 | Non-Metal Outgoing from ash Recycler | No ash recycling at this time. | - |
14 | Metals (Fe, Cu, Brass, Coins) | No ash recycling at this time. | - |
15 | Ash not recycled | Covanta Scale Records | 176,915 |

**Recycling Rate Calculations**

- **Numerator**: 528,187
- **Denominator**: 1,222,475
- **Rate**: 43.2%

**County Recycling Rate**

\[
(1 + 2 + 3 + 4 + 9 - 10 + 11 + 13 + 14) / (CMW - 5 - 6 - 7a) = 43.2\%
\]

**County Recycling Rate "Without Ash"**

\[
(1 + 2 + 3 + 4 + 9 - 10 + 11 + 13 + 14) / (CMW) = 43.2\%
\]

**State Recycling Rate**

\[
(2 + 3 + 4 + 9 - 10 + 11 + 13 + 14) / (CMW - 5 - 6 - 7a) = 38.5\%
\]

**EPA Recycling Rate**

\[
(2 + 3 + 4 + 9 - 10 + 11 + 13 + 14) / (CMW - 5 - 6 - 7a) = 38.5\%
\]

**Notes:**

- **Nonprocessibles are Construction & Demolition-type materials: not eligible for recycling credit, but are County-managed solid waste.**
- **For State and EPA methods, numerator and denominator exclude motor oil**
- **Nomenclature:**
  - "C&D" means "Construction and Demolition" waste, exclusive of MSW, traditionally managed by the private sector, but much now comes to County TS.  
  - "CMW" means "County Management Waste". It includes all MSW, whether or not exported by private sector collectors, but only C&D delivered to TS.  
  - "MSW" stands for "Municipal Solid Waste", and represents the waste eligible for recycling under the State recycling law, regulations and guidelines.
  - "TS" stands for the County's "Transfer Station", located in Derwood, Maryland, just south of Gaithersburg.

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**KEY:**

- 1 Calculated by netting measured collection from estimated yard waste generation.
- 2, 8 Audited or otherwise documented. Often based on truck scales of others.
- 4 Data is from State-certified County truck scales Owned by County.
- 7 Loaded on Rail to RRF (MSW burned)
- 7b By-pass (Accepted Processible Land filled)

**Market Users**

- Private Sector Recycling, Various Locations
- County Recycling Center (Drop-Off and MRF)
- Local C&D Recycler
- Solid Waste Transfer Station, Denwood, MD
- Waste-to-Energy Resource Recovery Facility in Dickerson, MD (Operated by Covanta, Inc.)
- Ash Recycling Contractor