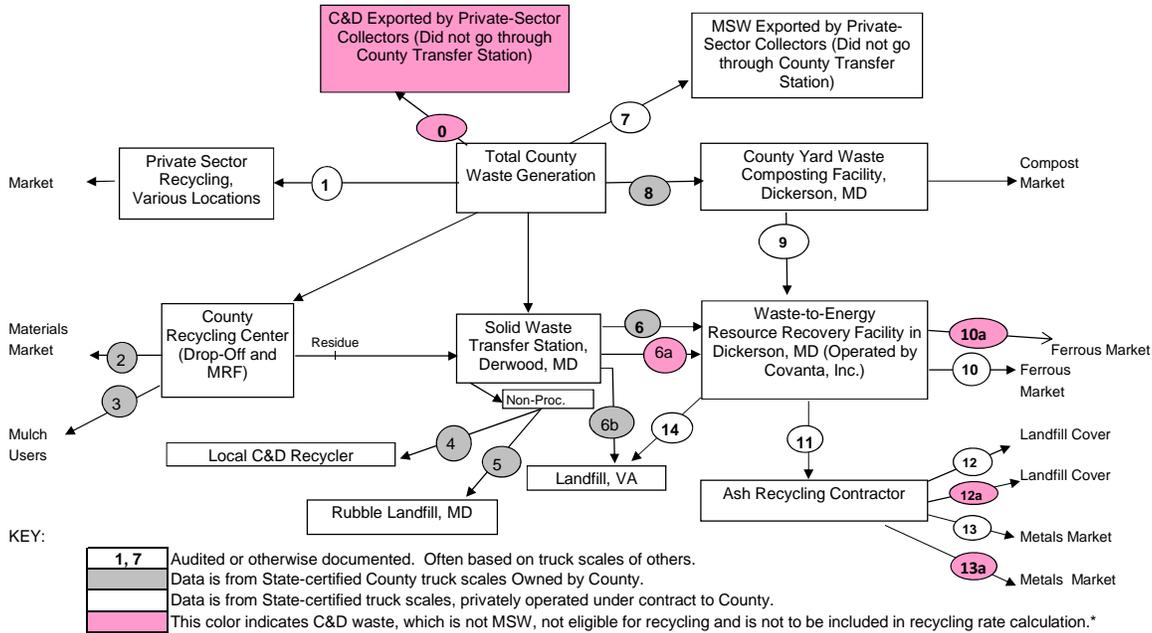


## **Appendix B**

### **Material Flow Diagram and Recycling Calculations: Calendar Year 2012**

**DRAFT**  
**MATERIAL FLOW DIAGRAM**  
**Calendar Year 2012**



|   |                  |
|---|------------------|
| <b>Total Waste Generation, Including C&amp;D Exported by Private Sector</b> | <b>1,336,422</b> |
| <b>County-Managed Waste (CMW) = 1 + 2 + 3 + 4 + 5 + 6a + 6b + 7 + 8</b>     | <b>1,186,726</b> |
| <b>MSW Generated (above less streams 4, 5 and 6a)</b>                       | <b>1,080,344</b> |

| Stream No. | Material Description                               | Sources of Data                                    | Total (tons/yr) | Comments  |
|------------|--|--|-----------------|---|
| 0          | Construction & Demo Debris Private Export          | Licensed Collector Reports under ER 92-59          | 149,696         | Not County-managed, includes both disposed and recycled C & D       |
| 1          | Recycled via non-County Facilities                 | Collector, Processor, Business & Self-Hauler Rpts. | 270,161         | Filtered to avoid double-counting                                   |
| 2          | County Recycling Facility Material Sales           | County TS & MRF Scales, Outbound                   | 82,986          | Outgoing to market from County Recycling Center                     |
| 3          | Mulch Loaded Out From TS                           | County Transfer Station (TS) Scale Records         | 35,069          | Scaled out as taken to County Mulch Contractor & Preserve Locations |
| 4          | Non-Processibles Recycled**                        | County TS Scale Out Records                        | 30,077          | Not included in MRA recycling calculation                           |
| 5          | Non-Processibles Landfilled**                      | County Trans. Statn. & Covanta Scale Records       | 4,825           | Not included in MRA recycling calculation                           |
| 6          | Loaded on Rail to RRF (MSW burned)                 | Covanta Scales as Loaded                           | 470,182         | Total tons loaded on rail to RRF Net of 6a                          |
| 6a         | Loaded on Rail to RRF (C&D Burned)                 | County Transfer Station (TS) Scale Records         | 71,480          | In-Bound C&D less Outbound Non-Processibles Landfilled              |
| 6b         | By-pass (Accepted Processible Landfilled)          | County TS Scale Out Records                        | -               |   |
| 7          | Refuse Disposed Out of County                      | Audited 6-Mo. Hauler Reports                       | 161,715         | Private Sector MSW Collection not delivered to County/TS            |
| 8          | All Incoming Leaves and Grass                      | Compost Facility & TS Scale Records                | 60,231          | Includes 0 to Backup Composters                                     |
| 9          | Composting Residue to RRF                          | MES Scale Records                                  | -               | Reported by Compost Facility Manager                                |
| 10         | Ferrous recovered at RRF                           | Covanta Scale Records                              | 8,602           | Recovered from ash at County Facility                               |
| 10a        | Ferrous recovered at RRF (C&D Residue)             | Internal Calculation                               | 1,313           | Not included in MRA recycling calculation                           |
| 11         | Ash Loaded to Ash Recycling Contractor             | Allied Monthly Report                              | 155,696         | Total ash (includes 12, 12a, 13, and 13a)                           |
| 12         | Non-Metal Outgoing from Ash Recycler               | Allied Monthly Report                              | 132,134         | Included in MRA recycling calculation                               |
| 12a        | Non-Metal Outgoing from Ash Recycler (C&D Residue) | Internal Calculation                               | 20,170          | Not included in MRA recycling calculation                           |
| 13         | Metals Outgoing from Ash Recycler                  | Allied Monthly Report                              | 2,965           | Metals from ash recycled; included in MRA rate calculation          |
| 13a        | Metals Outgoing from Ash Recycler (C&D Residue)    | Internal Calculation                               | 453             | Not included in MRA recycling calculation                           |
| 14         | All ash not recycled                               | Covanta Scale Records                              | -               |   |

| <b>Montgomery County Recycling Rate and Waste Diversion Rate Calculations (MRA Method)</b> |  |                    |             |           |
|--|--|--------------------|-------------|-----------|
|  | <b>Numerator</b>   | <b>Denominator</b> | <b>Rate</b> |           |
| <b>Recycling Rate</b>  | (1 + 2 + 3 + 8 - 9 + 10 + 12 + 13) / (CMW - 4 - 5 - 6a)          | 592,148            | 1,080,344   | 54.8%     |
| <b>Waste Diversion Rate</b>  | ((1 + 2 + 3 + 8 - 9 + 10 + 12 + 13) / (CMW - 4 - 5 - 6a)) + 5.0% | 592,148            | 1,080,344   | 59.8% *** |

Notes: \* Construction and Demolition waste (C&D) is waste identified by place of origin - construction or land clearing sites. C&D is reported on licensed hauler reports, but there may be additional C&D tons not reported and therefore not included in stream 0.  
 \*\*\* Nonprocessibles are Construction & Demolition-type materials: not eligible for recycling credit, but are County-managed solid waste.  
 \*\*\* Diversion Rate = Recycle Rate + 5.0% Source Reduction Credit

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.  
 "MRF" stands for Material Recovery Facility  
 "RRF" stands for Resource Recovery Facility