

Maryland Recycling Act (MRA) Tonnage Reporting Survey Guidelines

The Annotated Code of Maryland, Environment Article § 9-1705 requires “A county that has achieved the percentage of solid waste reduction required by this Article shall provide the report described in subsection (a) of this section to the Department annually, on a calendar year basis.” The referenced report shall include:

- The total amount, by weight, of solid waste collected;
- The total amount, by weight, of solid waste disposed of at solid waste acceptance facilities;
- The amount and types of materials recycled;
- The methods of disposal of solid waste used, other than recycling; and
- The percentage reduction in the amount of solid waste needing disposal that has been achieved.

The Maryland Recycling Act Tonnage Reporting Survey and the optional County Source Reduction Credit Report standardized report forms have been developed to ensure reporting of consistent, accurate and complete information.

General Instructions

- The survey must be submitted annually and be received within 90 days following the report period ending December 31st (*i.e.*, April 1st).
- Reporting forms are available under “County Coordinator Resources” located in the recycling section of MDE’s waste diversion web page at www.mde.maryland.gov/recycling.
- Report weights in tons (1 ton = 2,000 lbs.) to the nearest hundredth (*i.e.*, 0.01).
- Reporting forms are now completed online at:

○ <https://mrrs.mde.state.md.us/>

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Maryland Recycling Act Tonnage Reporting Survey

FORM A – County Solid Waste Accounting Form

IMPORTANT!

Table A1 – Waste Disposed

The Maryland Department of the Environment (MDE) will record total annual waste tonnage disposed as reported by permitted Solid Waste Acceptance Facilities in accordance with Annotated Code of Maryland, Environment Article § 9-204(m)(4)(i). **Counties should report in Table A1, only the amount of solid waste disposed by your County (including solid waste from businesses whose recycling tonnages are included in the annual MRA Tonnage Reporting Survey) that DID NOT go to one of the permitted facilities!** A list of the permitted facilities is included in the annual MRA Tonnage Reporting Survey sent to the Counties by MDE and is available on MDE's web site.

Table A1 is only for reporting the amount of solid waste **DISPOSED** by your jurisdiction that is not captured in Solid Waste Acceptance Facility Reports submitted to MDE (see above). Do not include any recycling tonnages in Table A1.

Name and Location of Disposal Facility Accepting Waste Collected in Your County. Only non-MDE permitted solid waste acceptance facilities should be listed. The information should include the name and city of the facility where the waste was disposed (*e.g.*, Nasty Landfill, Nimby, Virginia or Nasty Incinerator, Nimby, Pennsylvania).

Type of Facility. Type of facility (*e.g.*, Waste-to-Energy, Municipal Solid Waste (MSW) landfill, Incinerator, etc.) that is the final destination of the waste.

MRA Waste. Include the MRA waste disposed from non-MDE permitted solid waste acceptance facilities as defined in Annotated Code of Maryland, Environment Article § 9- 1701(l). (See “MRA Waste” in *Definitions*)

Non-MRA Waste. Includes all the waste disposed by non-MDE permitted solid waste acceptance facilities that is not, by definition, an MRA waste.

Total Waste Disposed. Add the tonnages from the MRA waste and Non-MRA waste columns. These totals will be added by MDE to the total annual waste tonnage disposed as reported to MDE by permitted Solid Waste Acceptance Facilities in accordance with Annotated Code of Maryland, Environment Article § 9-204(n)(4)(i).

VERY IMPORTANT!!!

FORM B – County Recycling Accounting Form

Jurisdictions may only report recycling tonnages that were generated in the County and collected for recycling during the reporting period. For example Company A located in your County:

- Accepts 1,000 tons of sprockets that are recycled.
- Only 10 tons of the soon-to-be recycled sprockets comes from your County;
- Generates 200 tons of waste from its operation; and
- All 200 tons of the waste is recycled.



In this situation:

- Only the 10 tons of sprockets that originated in your County can count in your recycling tonnage; and
- Since the waste is generated in your County, all 200 tons of waste that is recycled can count in your recycling tonnage.
- **MDE IS NOT** collecting and reporting recycling tonnages from permitted solid waste acceptance facilities. Counties are still responsible for reporting recycling tonnages from permitted solid waste acceptance facilities.
- Care must be taken to avoid double counting recyclables when the same material could be handled by a number of individuals including recycling haulers, facilities and processors. To avoid problems of double counting, acceptable documentation of materials will be the weight given at the first scale - preferably during the collection phase. Therefore, documentation supplied by a recycling facility on the quantity of material that enters their facility, generally, will be acceptable. (The facility must be able to identify the county of origin for the material.) The County Recycling Coordinator should confirm that the material has not been documented and reported previously to the county. County recycling coordinators should also check the recycling contractor information on All StAR reports that detail recycling at State agencies, to make sure that the materials are not captured on the Processor Reports submitted to the County.

Documentation: Counties should obtain the following prior to reporting recycling tonnages to MDE:

- Actual load documentation, in either weight or volume, (*i.e.*, weight slips) from the hauler or facility that first accepted the materials;
 - A verification letter on the hauler's or recycling facility's letterhead that summarizes recyclables tonnage accepted for recycling generated within a specific jurisdiction; or
 - A MRA Tonnage Report Form for Processors or Annual All StAR Recycling Survey Form.
 - Business Recycling Reporting Survey (or similar document) detailing recycling and waste disposal information of any business that a County wishes to include in the recycling totals.
- Important:** If a County wishes to report a business's recycling totals, the County needs to make sure that a business's waste disposed totals are also reported. If a County can not verify the waste disposed totals for a business, then the recycling totals from that business will not be accepted for inclusion in the County's annual recycling totals reported to MDE via the MRA Tonnage Reporting Survey.

VERY IMPORTANT!!

An individual, group or jurisdiction may not simply say that they collected a certain amount of materials for recycling. There must be some documentation for MDE audit purposes.

- In general, wastes that are incinerated will not be counted toward the MRA Recycling Rate.
- Wastes that are converted to fuel are not considered recycling and will not be counted toward the MRA Recycling Rate. This means that if material is sent to a facility where fuel is one of the products produced, the portion of the product converted to fuel must be



excluded from the recycling total from that facility. **Example: 1,000 tons of solid animal protein/fat are sent to a recycling facility. Of the 1,000 tons processed, 500 tons are converted to a biofuel. The 500 tons converted to biofuel DO NOT count as recycling and should not be reported as recycled. NOTE: It may be necessary to extrapolate the amount to be excluded from being reported recycled. A facility may not know the exact amount of your material converted to biofuel, but they would know that 50% of all the material they received is converted to biofuel.**

- Material composted and anaerobic digested is consider a recycled material.
- A Volume-To-Weight Conversion Table is available after the Definitions section to assist in determining weights of certain materials.

Table B1 – MRA Materials Recycled

- Residential vs. Commercial: Refers to origin of the recyclable material (*i.e.*, from whom the material was collected) not who collects the recyclable material and reports it to the County.
- Single-Stream Recycling: Single-stream recycling totals must be broken down into the individual components (*e.g.*, paper, plastic, etc.). If this information is not available from the processor of the single-stream recyclables, than the following breakdown should be used.¹
 - ▶ **Contamination =19.9 %**
 - ▶ **Glass =19.6 %**
 - ▶ **Metal = 3.0 %**
 - ▶ **Paper = 49.7 %**
 - ▶ **Plastic = 7.8 %**

The following is an example of the recycling reporting amounts that should be reported from a jurisdiction that collected 100 tons of single-stream recyclables using the breakdown specified above:

100 tons x 0.199 = 19.9 tons of contamination (not reported)

100 tons x 0.196 = 19.6 tons of mixed glass

100 tons x 0.03 = 3.0 tons of mixed metal

100 tons x 0.497 = 49.7 tons of mixed paper

100 tons x 0.078 = 7.8 tons of mixed plastic.¹

What Counts and Guidelines: Remember to check definitions for clarification on what constitutes a certain type of recyclable (*e.g.*, What is Mixed Yard Waste? etc.). The definition list is not all-inclusive. It includes materials in which questions arose as to whether they can be

¹ Average of 2 Maryland MRFs (Waste Management MRF/Elkridge & PG County MRF) and “Sample of MRF Blended Values in the U.S. Oct 2019”. THE RECYCLING PARTNERSHIP | 2020 STATE OF CURBSIDE RECYCLING REPORT.



counted as a MRA material or not. The list is constantly evolving so remember to get a new copy prior to completing the MRA Tonnage Reporting Survey each year.

- When applicable, MDE must approve the end use of a particular material for recycling for a County to count it as recycling.
- Other: If listing more than 1 other material and additional space is needed, use Table B1b – Other MRA Recyclables. **Make sure to include the MRA category (Column 1 in Table B1) along with the name of the MRA Recyclable for each material (e.g., Paper/books not just books).**
- Table B1b Total (Tons): Include the total from Table B1b here. This is added to the list of materials included in Table B1 to generate the Total MRA (Tons) value. Avoid double counting. If a MRA recyclable is already listed as a “Other” recyclable in Table B1 it should not be included in Table B1b. Table B1b is only used for additional space when needed to list “Other” MRA recyclables that did not fit in Table B1. **IMPORTANT: Remember to include the “Category” (e.g., metal, paper, etc.) in addition to the material.**

Table B1b – Other MRA Recyclables

- See “Table B1b Total (Tons)” instruction, above.

Table B2 – Non-MRA Materials Recycled

- Asphalt and Concrete: Counties are responsible for obtaining recycled Asphalt and Concrete tonnages from the County Roads Departments for inclusion in the table. MDE will collect the recycled asphalt and concrete tonnages used on State roads.

Table C1 – MRA Waste Diversion Rate Calculation

FYI

- Since A2 comes from permitted solid waste acceptance facilities and is collected by MDE, COUNTIES CANNOT COMPLETE THIS ENTIRE TABLE! Counties can request the A2 amount from MDE, after April 30 of each reporting year, in order to determine their preliminary waste diversion rate. DO NOT hold this report waiting for A2! The report is due to MDE on April 1.



Definitions

Aluminum: Aluminum recovered from water treatment plants does **NOT** count towards the MRA rate and should be included in the “Scrap Metal” section in Table B2.

Aluminum Foil and Food Tray Containers: Aluminum foil and aluminum food tray containers count towards the MRA rate and should be included in the “Other” section of the “Metals” category in Table B1.

Animal Bedding: See “Stall Waste.”

Animal Carcasses: The recycling of animal carcasses counts towards the MRA rate and should be included in the “Other” section of the “Other Materials” category for non-composted recycling or the “Other” section of the “Compost/Mulch (Other)” category for composted recycling in Table B1.

Animal Feed: Vegetable waste from a processor sent to a farmer as a substitute for other feed. Animal/livestock feed counts towards the MRA rate and should be included in the “Other” section of “Other Materials”.

Animal Organs (Offal): Animal organs, tissues, or blood that are the waste products from an animal’s primary purpose that are recycled and marketed into a material not related to the animal’s primary purpose (*e.g.*, an animal slaughtered for human consumption with the byproducts used as a research tool, medical training, composted, etc.) counts towards the MRA rate and should be included in the “Animal Protein/Solid Fat” section of the “Other Materials” category for non-composted recycling or the “Other” section of the “Compost/Mulch (Other)” category for composted recycling in Table B1.

Similarly, a research animal that has its organs recycled as pet food counts towards the recycling rate counts toward the MRA rate. However, organs processed into pet food from an animal that was raised as food stock does **NOT** count as recycling.

Animal Protein/Fats (liquid): Liquid animal fats do **NOT** count towards the MRA rate. They should be included in the “Other” section in Table B2.

Animal Protein/Fats (solid): In order for a material to be classified as an animal solid protein/fat and reported in Table B1, the material must pass the Paint Filter Liquids Test (Method 9095B) as detailed by the EPA. Also, the material cannot be converted to biofuel. Details of the test are available at [SW-846 Test Method 9095B: Paint Filter Liquids Test | US EPA](#)

Animal Renderings: Animal waste tissue or solid fat that has been converted or melted down by heating. Renderings not converted to biofuel count toward the MRA recycling rate and should be included in the “Animal Protein/Solid Fat” section of the “Other Materials” category in Table B1.

Annotated Code of Maryland, Environment Article § 9-102(m)(4)(i): All permitted solid waste acceptance facilities shall at least annually provide to the Department information that is necessary to prepare the report required under paragraph (2) of this subsection.

Back-End Scrap Metal: Ferrous and non-ferrous metal pulled post incineration. Back-end scrap counts towards the MRA rate and should be included in the “Back-End Scrap” section of the “Metals” category in Table B1. **IMPORTANT:** Since back-end scrap metal is a component of non-source-separated waste, it is reported on Table A1 as “MRA Waste”. Only the back-end scrap metal recycled is reported on Table B1. See also “Front-End Scrap Metal,” “Metal (MRA),” and “Scrap Metal (Material)”.

Ballasts: Light ballasts do **NOT** count towards the MRA rate. If the ballasts are recycled (not simply being diverted from the waste stream) they should be included in the “Other” section of Table B2.

Bakery Waste: Bakery waste that is composted counts towards the MRA rate and should be included in the “Other” section of the “Compost/Mulch (Other)” category in Table B1. See “Compost/Mulch” for further details. If the bakery waste is sold to an animal feed producer it counts towards the MRA rate and should be included in the “Other” section of the “Other Materials” category in Table B1.

Bark: Scrap bark from a manufacturing process that is composted or mulched counts towards the MRA rate and should be included in the “Wood Materials” section of the “Compost/Mulch” category in Table B1. See “Compost/Mulch” for further details. Scrap bark that is manufactured into a new product (*e.g.*, charcoal) counts towards the MRA rate and should be included in the “Other” section of the “Other Materials” category in Table B1.

Batteries (household type): Household type (*e.g.*, AA, D, rechargeable, etc.) batteries that are recycled (not just properly disposed) count towards the MRA rate and should be included in the “Other” section of the “Metals” category in Table B1.

Bicycles: Metal bicycles that are recycled count towards the MRA rate and should be included in the “Other” section of the “Metals” category in Table B1. Refurbished and reused bicycles do **NOT** constitute recycling and should not be reported.

Biofuel: See “Fuel.”

Biomass: Biomass does **NOT** constitute recycling.

Boats: Boats do **NOT** count towards the MRA rate and should be included in the “Other” section of Table B2.

Books: Unsold returned books from bookstores to manufacturer count towards the MRA rate and should be included in the “Other” section of the “Paper” category in Table B1.

Bullet Casings: Bullet casings do **NOT** count towards the MRA rate and should be included under “Scrap Metal” in the non-MRA table.

C&D Debris (Code of Maryland Regulations 26.04.07.13): Construction and Demolition Debris. Construction debris is structural building material including cement, concrete, bricks

(excluding refractory type), lumber, plaster and plasterboard, insulation, shingles, floor, wall and ceiling tile, pipes, glass, wires, carpet, wallpaper, roofing, felt, or other structural fabrics.

Demolition debris is debris associated with the razing of buildings, roads, bridges, and other structures includes structural steel, concrete, bricks (excluding refractory type), lumber, plaster and plasterboard, insulation, cement, shingles and roofing material, floor and wall tile, asphalt, pipes, wires, and other items physically attached to the structure, including appliances if they have been or will be compacted to their smallest practical volume.

Canes: Wooden canes that are composted or mulched count towards the MRA rate and should be included in the “Wood Materials” section of the “Compost/Mulch” category in Table B1. See “Compost/Mulch” for further details. Metal canes that are recycled count towards the MRA rate and should be included in the “Other” section of the “Metals” category in Table B1. Refurbished and reused canes do **NOT** count towards the MRA rate and should be included in the “Other” section in Table B2.

Carpet Remnants: Carpet remnants returned to the manufacturer to be used in the manufacturing process count towards the MRA rate and should be included in the “Textiles” section of the “Other Materials” category in Table B1.

Catalogues: Unsold catalogues picked up by the distributor and recycled count towards the MRA rate and should be included in the “Other” section of the “Paper” category in Table B1.

Chicken Manure: Generally, chicken manure that is composted does **NOT** count towards the MRA rate and should be included in the “Other” section in Table B2. However, if the manure would have been disposed in a refuse disposal system (as opposed to being land applied, for example) had it not been recycled, it would count towards the MRA rate and should be included in the “Other” section of the “Compost/Mulch (Other)” category in Table B1. See “Compost/Mulch” for further details.

Christmas Trees: Christmas trees that are composted or mulched count towards the MRA rate and should be included in the “Brush and Branches” section of the “Compost/Mulch (Yard)” category in Table B1. See “Compost/Mulch” for further details.

Christmas trees used as sediment control devices (approved and documented by the Maryland Department of Natural Resources) count towards the MRA rate and should be included in the “Other” section of the “Other Materials” category in Table B1.

Christmas trees that are incinerated do **NOT** count towards the MRA rate.

Cloth: Cloth material processed into rags, etc., counts towards the MRA rate and should be included in the “Textiles” section of the “Other Materials” category in Table B1.

Commingled Containers: Containers of different materials collected together (*i.e.*, plastic/glass/metal or plastic/metal or glass/metal or plastic/glass).

Compost/Mulch: Only thoroughly composted/mulched material that is marketed (not landfilled), or authorized for use by MDE as a substitute for cover material in the landfill, or used as sediment

control devices (approved and documented by the Maryland Department of Natural Resources) may be counted. Compost or mulch that is burned as fuel is not considered marketed and DOES NOT count as a recyclable material. **IMPORTANT:** Simply using a compostable/mulchable material for a specific purpose (e.g., spreading stall waste on a field) DOES NOT constitute a “thoroughly composted/mulch material” and does NOT count towards the MRA and should be included in the “Other” section of Table B2.

Compost/Mulch (Yard): Includes mixed yard waste and materials generated from landscaping activities. Landclearing debris does NOT count towards the MRA rate and should be included in the “Landclearing Debris” section of Table B2. See “Compost/Mulch” for further details.

Compost/Mulch (Other): Includes materials such as food waste, wood materials, and other organics composted but not classified as “Compost/Mulch (Yard)”. See also “Compost/Mulch” and definitions of specific materials for further details.

Construction & Demolition Debris: See “C&D Debris.”

Cooking Grease: In order for cooking grease to count as a MRA Recyclable and be reported in Table B1, the material must pass the Paint Filter Liquids Test (Method 9095B) as detailed by the EPA (or a similar test that identifies the grease as a solid, not a liquid). Also, the material cannot be converted to biofuel. Details of the test are available at [SW-846 Test Method 9095B: Paint Filter Liquids Test | US EPA](#).

Corn Ensilage (silage): Corn silage that is composted is considered recycled.

Additionally, waste corn silage sold to an animal feed producer would be considered recycling ONLY if the primary purpose of the corn silage was NOT animal feed. Conversely, waste corn silage sold to an animal feed producer would NOT be considered recycling if the primary purpose of the corn silage WAS animal feed.

Finally, corn silage determined to be recycled is a MRA recyclable IF the waste corn silage would have been disposed in a refuse disposal facility if not recycled (it should be included in the “Other” section of the “Compost/Mulch (Other)” category in Table B1). If the waste corn silage would NOT have been disposed in a refuse disposal facility had it not been recycled, it would be considered a Non-MRA recyclable (it should be included in the “Other” section in Table B2).

See “Compost/Mulch” for further details.

Crutches: Wooden crutches that are composted or mulched count towards the MRA rate and should be included in the “Wood Materials” section of the “Compost/Mulch” category in Table B1. See “Compost/Mulch” for further details. Metal crutches that are recycled count towards the MRA rate and should be included in the “Other” section of the “Metals” category in Table B1. Refurbished and reused crutches do NOT count towards the MRA rate and should be included in the “Other” section in Table B2.

Durable Medical Equipment: See “Hospital Appliance”.

Electronic Waste: Recycled or refurbished electronic waste counts towards the MRA rate and should be included in the “Electronics” section of the “Other Materials” category in Table B1. **IMPORTANT:** Jurisdictions reporting electronics recycling should follow-up with their contractor and verify that the electronic waste is actually being recycled by the processor.

Fly Ash: Fly ash from public utilities is not a recyclable material.

Food Donations: Food donations do **NOT** count towards the MRA rate or the non-MRA rate. The Counties can earn Source Reduction credits with food donations.

Food Waste: Food waste that is composted counts towards the MRA rate and should be included in the “Other” section of the “Compost/Mulch (Other)” category in Table B1. See “Compost/Mulch” for further details.

Food converted to Biomass does **NOT** constitute recycling.

Foundry Waste: Foundry waste used in asphalt counts towards the MRA rate and should be included in the “Other” section of the “Other Materials” category in Table B1.

Freon: Freon does **NOT** count towards the MRA rate and should be included in the “Other” section in Table B2,

Front-End Scrap Metal: Ferrous or non-ferrous materials pulled from the waste stream in a refuse disposal system. Front-end scrap counts towards the MRA rate and should be included in the “Other” section of the “Metals” category in Table B1. See also “Back-End Scrap Metal”, “Metal (MRA)”, and “Scrap Metal (Material)”.

Fuel: Material converted to any type of fuel does **NOT** constitute recycling and should not be reported in Table B1.

Furniture: Furniture that is processed into other materials counts towards the MRA rate and should be included in the “Other” section of the “Other Materials” category in the MRA table. Furniture that is donated or sold for reuse does **NOT** count towards the MRA rate.

Glass (Appliance, Drinking, Furniture, Industrial Process): Glass from appliances, drinking containers, furniture, or pre-consumer from industrial processes counts towards the MRA rate and should be included in the “Other” section of the “Glass” category in Table B1.

Glass (C&D, Transportation): Glass from transportation equipment (e.g., cars, etc.) and from C&D activities (e.g., windows, etc.) does **NOT** count towards the MRA rate and should be included in the “Other” section in Table B2.

Goodwill Clothing Items: Clothing items that are not sold and are subsequently sold to a rag dealer count towards the MRA rate and should be included in the “Textiles” section of the “Other Materials” category in Table B1.

Grain Waste: Grain waste that is composted is considered recycled.

Additionally, grain waste sold to an animal feed producer would be considered recycling **ONLY** if the primary purpose of the grain was **NOT** animal feed. Conversely, grain waste sold to an animal feed producer would **NOT** be considered recycling if the primary purpose of the grain **WAS** animal feed.

Finally, grain determined to be recycled is a MRA recyclable **IF** the grain waste **would have been** disposed in a refuse disposal facility if not recycled (it should be included in the “Other” section of the “Compost/Mulch (Other)” category in Table B1). **If** the grain waste **would NOT have been** disposed in a refuse disposal facility had it not been recycled, it would be considered a Non-MRA recyclable (it should be included in the “Other” section in Table B2).

See “Compost/Mulch” for further details.

Hatchery Waste: Hatchery waste that is composted counts towards the MRA rate and should be included in the “Other” section of the “Compost/Mulch (Other)” category in Table B1. See “Compost/Mulch” for further details. If the hatchery waste is processed into a protein supplement it counts towards the MRA rate and should be included in the “Other” section of the “Other Materials” category in Table B1.

Hospital Appliance: Hospital appliances include canes, crutches, oxygen tank carts, walkers, wheelchairs, etc. If recycled, hospital appliances count towards the MRA rate and should be included in Table B1.

Hospital Waste: See “Infectious Waste.”

Household Hazardous Waste (Annotated Code of Maryland, Environment Article § 9-1801):

Household Hazardous Waste (HHW) is any waste material, including garbage or trash, derived from a household that would be listed as hazardous waste under the Resource Conservation and Recovery Act but for the fact that the waste is derived from a household. Household hazardous waste may include:

- Agricultural chemicals;
- Cleaning agents and solvents;
- Paint;
- Pesticides; and
- Preservatives.

HHW is a MRA waste. HHW that is recycled (*i.e.*, processing HHW components into new products) counts towards the MRA rate and should be included in the “Other” section of the “Other Materials” category in Table B1. **IMPORTANT: Simply diverting HHW from the waste stream does NOT constitute recycling.** Note: For the MRA Tonnage Report, Antifreeze and Oil DO NOT count towards the MRA rate should be included in Table B2.

Industrial Fluids: Industrial fluids (non-HHW) that are recycled do **NOT** count towards the MRA rate and should be included in the “Other” section in Table B2.



Infectious Waste (Annotated Code of Maryland, Environment Article § 9-227): Any waste that comes from a hospital, laboratory, or other health care facility as defined in § 19-114 of the Health-General Article and that is known or suspected to be contaminated with organisms capable of producing disease or infection in humans. “Infectious waste” includes:

- Contaminated disposable equipment, instruments, and utensils;
- Contaminated needles, scalpels, and razor blades;
- Human tissues and organs that result from surgery, obstetrics, or autopsy;
- Feces, urine, vomitus, and suctionings;
- Live vaccines for human use;
- Blood and blood products; and
- Laboratory specimens, such as tissues, blood elements, excreta, and secretions.

The burning of infectious waste does **NOT** count as recycling and should **ONLY** be reported as Non-MRA waste disposed in Table A1.

Insulators: Insulators used in the electric grid do **NOT** count toward the MRA and should be included in the “Other” section in Table B-2.

Landclearing Debris (Code of Maryland Regulations 26.04.07.11): “Earthen material such as clays, sands, gravels, and silts, topsoil, tree stumps, root mats, brush and branches, logs, vegetation, and rock” from land clearing operations that if not recycled are discarded in landclearing debris, rubble, or C&D landfills.

Landscaping Debris: Grass, leaves, brush and branches, and mixed yard waste generated from landscaping (Webster’s II – New Riverside University Dictionary, 1984. *def.*, to adorn or improve a section of ground) operations.

Leaves: In addition to compost/mulched leaves, non-decomposed or mulch leaf mixture may count (when used as a soil amendment) towards the MRA rate and should be included in the “Leaves” section of the “Compost/Mulch (Yard)” category in Table B1. The tonnage of material incorporated into the soil may be counted as long as the activities have been approved by the Maryland Department of Agriculture.

Litho-plates: Litho-plates used in x-ray machines count towards the MRA rate and should be included in the “Other” section of the “Metals” category in Table B1.

Livestock: See “Animal Carcasses.”

Manure: See “Stall Waste”.

Mattresses: Mattresses that are processed and remanufactured into new products count towards the MRA rate and should be included in the “Textiles” section of the “Other Materials” category in Table B1.

Mercury: Mercury that is recycled counts towards the MRA rate and should be included in the “Other” section of the “Metals” category in Table B1. **IMPORTANT: Simply diverting mercury from the waste stream does NOT constitute recycling.**



Metal (MRA): Acceptable MRA metals are limited to specific types of material, other than scrap material, that would ordinarily be disposed in a refuse disposal system. Only the following metals count towards the MRA rate and should be included in the “Metals” category in Table B1:

- Aluminum beverage and food containers;
- Aluminum foil and food tray containers;
- Bi-metal, tin, and steel food or beverage containers;
- White goods (*e.g.*, refrigerators, stoves, washing machines, air conditioners, etc.);
- Lead Acid Batteries (*e.g.*, automobile batteries)
- **Front-end scrap metal**, ferrous or non-ferrous materials pulled from the waste stream at a municipal solid waste disposal facility via front-end recycling;
- **Back-end scrap metal**, ferrous and non-ferrous metal pulled post incineration; and
- Any other metals deemed acceptable by the Department.

See also “Back-End Scrap Metal”, “Front-End Scrap Metal”, and “Scrap Metal (Material)”.

Mixed Yard Waste (Annotated Code of Maryland, Environment Article § 9-1701(s)(1)(2)): “Organic plant waste derived from gardening, landscaping, and tree trimming activities. Yard Waste includes leaves, garden waste, lawn cuttings, weeds, and pruning material” that is composted or mulched and marketed.

Motor Oil: Motor oil that is recycled does **NOT** count towards the MRA rate and should be included in the “Motor Oil” section in Table B2.

Motor Oil Filters: Used motor oil filters count towards the MRA rate and should be included in the “Other” section of the “Metals” category in Table B1.

MRA Recyclables: Materials that meet the definition of “Recyclable Material” AND are not excluded under the definition of the “MRA Waste” from being an MRA material.

MRA Waste: See “Solid Waste Stream.”

MSW Compost: Composting of non-source-separated MSW materials. **IMPORTANT:** Since incoming tonnage consists of non-source-separated waste, it must be reported on Table A1 as “MRA Waste”. Only the portion of the outgoing tonnage of compost that is marketed counts toward the MRA recycling rate and reported on Table B1. MSW compost excludes separately collected landscaping materials that are included in the “Compost/Mulch (Yard)” category.

MSW-to-Energy Ash: Recyclable materials do not include incinerator ash and does **NOT** count towards the MRA rate.

Oxygen/Propane Tanks: Oxygen/Propane Tanks do **NOT** count towards the MRA rate and should be included in the “Scrap Metal” section in Table B2.

Oxygen Tank Carts: Metal oxygen tank carts that are recycled count towards the MRA rate and should be included in the “Other” section of the “Metals” category in Table B1. Refurbished and

reused carts do **NOT** count towards the MRA rate and should be included in the “Other” section in Table B2.

Oyster/Clam Shells: Oyster and clam shells that are composted counts towards the MRA rate and should be included in the “Other” section of the “Compost/Mulch (Other)” category in Table B1. See “Compost/Mulch” for further details. If the oyster and clam shells are recycled into another product, it counts towards the MRA rate and should be included in the “Other” section of the “Other Materials” category in Table B1.

Pallets: Wood pallets that are composted or mulched count towards the MRA rate should be included in the “Other” section of the “Compostables” category in the MRA table. Wood pallets that are refurbished count towards the MRA rate and should be included in the “Other” section of the “Other Materials” category in the MRA table.

Paper Waste: Paper waste from print shops that is recycled off-site counts towards the MRA rate and should be included in the “Other” section of the “Paper” category in Table B1.

Paint: Recycled paint counts towards the MRA rate and should be included in the “Other” section of the “Other Materials” category in Table B1.

PCB Light Ballasts: See “Ballasts.”

Porcelain Insulators: See “Insulators.”

Pozzolan (Annotated Code of Maryland, Environment Article § 15-407): “The finely divided residue which results from combustion of ground or powdered coal and is released by combustion gasses, as defined by the test methods published by the American Society for Testing Methods.” Pozzolan is not a recyclable material.

Propane Tanks: See “Oxygen Tanks”.

Recyclable Materials (Annotated Code of Maryland, Environment Article § 9-1701(l)): Those materials that would otherwise become solid waste for disposal in a refuse disposal system and may be collected, separated, or processed and returned to the market-place in the form of raw materials or products. Recyclable materials do not include incinerator ash. SEE “MRA Recyclables”, also.

Renderings: See “Animal Renderings.”

Resource Recovery Facility (Annotated Code of Maryland, Environment Article § 9-1701(o)): A facility in existence as of January 1, 1988 that:

- Processes solid waste to produce valuable resources, including steam, electricity, metals, or refuse-derived fuel; and
- Achieves a volume reduction of at least 50 percent of its solid waste stream.

Roofing Shingles: Roofing Shingles from the manufacturing process can be counted towards the

MRA rate and should be included in the “Other” section of the “Other Materials” category in Table B1. Roofing shingles from a construction job do **NOT** count towards the MRA rate and should be included in the “C&D Debris” section in Table B2.

Rubble: Wastes acceptable for disposal in a permitted rubble landfill or cell including: demolition debris, construction debris, asbestos, and landclearing debris. Rubble does **NOT** count towards the MRA rate and should be included in the “C&D” section in Table B2.

Sawdust: Sawdust from an industrial process that is composted/mulched counts towards the MRA rate and should be included in the “Other” section of the “Compost/Mulch (Other)” category in Table B1. See “Compost/Mulch” for further details. Sawdust used as animal bedding counts towards the MRA rate and should be included in the “Other” section of the “Other Materials” category in Table B1.

Scrap Metal (Material): “Home scrap” and any scrap metal or other scrap materials that are not normally disposed of at a refuse disposal site. Scrap material includes scrap metal that has historically been processed through a scrap yard for recycling such as automobiles, plumbing materials, etc. Scrap material **does not** include:

- Aluminum beverage and food containers;
- Aluminum foil and food tray containers;
- Bi-metal, tin, and steel food or beverage containers;
- White goods (*e.g.*, refrigerators, stoves, washing machines, air conditioners, etc.);
- Lead Acid Batteries (*e.g.*, automobile batteries)
- **Front-end scrap metal**, ferrous or non-ferrous materials pulled from the waste stream at a municipal solid waste disposal facility via front-end recycling;
- **Back-end scrap metal**, ferrous and non-ferrous metal pulled post incineration; and
- Any other metals deemed acceptable by the Department.

Scrap metal is further defined per Annotated Code of Maryland, Business Regulation Article § 17-1001 as:

nonferrous articles made wholly or substantially of:

- Aluminum;
- Babbitt metal;
- Brass;
- Bronze;
- Light copper;
- Heavy copper;
- Lead;
- Low carbon chrome;
- Low carbon manganese;
- Molybdenum;
- Monel metal;
- Pewter;
- Nickel;
- Stainless steel;

- Tin;
- Vanadium;
- Zince;
- Platinum;
- Gold;
- Rhodium; or
- Other nonferrous metals; and the following used articles, made of either ferrous or nonferrous metal:
 - Catalytic converters;
 - Metal bleachers;
 - Hard-drawn copper;
 - Metal beer kegs;
 - Cemetery urns;
 - Grave markers;
 - Propane tanks;
 - Cell tower batteries; and
 - And other used articles owned by a public utility including:
 - Guardrails;
 - Manhole covers;
 - Metal light poles;
 - Tree grates;
 - Water meters; and
 - Street signs

Scrap metal does **NOT** count towards the MRA rate and should be included in the “Scrap Metal” section in Table B2. See also “Back-End Scrap Metal”, “Front-End Scrap Metal”, and “Metal (MRA)”.

Sewage Sludge (Annotated Code of Maryland, Environment Article § 9-201(l)): Any thickened liquid, suspension, settled solid, or dried residue that a sewage treatment plant extracts from sewage.

Silver Sludge: Silver sludge that is recycled counts towards the MRA rate and should be included in the “Other” section of the “Metals” category in Table B1.

Single Stream Recyclables: See “Single-Stream Recycling” under Section “Table B1 – MRA Materials Recycled” on page 4, above.

Slag: Slag from the steel manufacturing process counts towards the MRA rate and should be included in the “Other” section of the “Other Materials” category in Table B1.

Solid Waste (Annotated Code of Maryland, Environment Article § 9-101(j)): Any garbage, refuse, sludge, or liquid from industrial, commercial, mining, or agricultural operations or from community activities. “Solid Waste” includes: scrap tires as defined in § 9-201 of this title; and organic material capable of being composted that is not composted in accordance with regulations adopted under § 9-1725(b) of this title. “Solid Waste” does not include solid or

dissolved material in domestic sewage or in irrigation return flows; compost as defined in § 9-1701 of this title; or organic material capable of being composted that is composted in accordance with regulations adopted under § 9-1725(b) of this title.

Solid Waste Stream (Annotated Code of Maryland, Environment Article § 9-1701(p)):

Garbage or refuse that would, unless recycled, be disposed of in a refuse disposal system located in this State. “Solid Waste Stream” does not include hospital waste, rubble, scrap material, landclearing debris, sewage sludge, and waste generated by a single individual or business and disposed of in a facility dedicated solely for that entity’s waste.

Solvents: See “Industrial Fluids.”

Stall Waste: Animal stall waste that is composted counts towards the MRA rate and should be included in the “Other” section of the “Compost/Mulch (Other)” category in Table B1. See “Compost/Mulch” for further details.

Textiles: Textile material processed into other materials counts towards the MRA rate and should be included in the “Textiles” section of the “Other Materials” category in Table B1.

IMPORTANT: Donated or reused textiles do **NOT** count towards the MRA rate and should be included in the “Other” section in Table B2.

Tires: Recycled tires, retread tires, and tires burned in cement kilns (12% of the total weight of tires used in cement kilns) count towards the MRA rate and should be included in their corresponding section of the “Other Materials” category in Table B1.

Tires authorized for use by a State as Alternate Daily Cover (ADC) count towards the MRA rate and should be included in “Tires “Recycled)” section of the “Other Materials” category in Table B1. **IMPORTANT:** In order for tires used as ADC to count, a County **MUST** obtain and maintain documentation, from the State that indicates the State allows tires to be used as ADC, as proof. Maryland **DOES NOT** authorize tires for use as ADC.

Tires burned for fuel **DO NOT** count towards the MRA rate and should be included in the “Other” section in Table B2.

Toner Cartridges: Recycled toner cartridges count towards the MRA rate and should be included in the “Other” section of the “Other Materials” category in Table B1.

Utility Poles: Utility poles (wood) that are recycled do **NOT** count towards the MRA rate and should be included in the “Other” section of Table B2. Utility poles (metal) that are recycled do **NOT** count towards the MRA rate and should be included in the “Scrap Metal” section of Table B2.

Vegetable Oil: Vegetable oil does **NOT** count towards the MRA rate. It should be included in the “Other” section in Table B2.

Vegetable Waste: Vegetable waste that is composted counts towards the MRA rate and should be included in the “Food Waste” section of the “Compost/Mulch (Other)” category in Table B1. See “Compost/Mulch” for further details. Vegetable waste from a processor sent to a farmer as a



substitute for other feed counts towards the MRA rate and should be included in the “Other” section of the “Other Materials” category in Table B1.

Waste Oil: See “Motor Oil”.

Walkers: Metal walkers that are recycled count towards the MRA rate and should be included in the “Other” section of the “Metals” category in Table B1. Refurbished and reused walkers do **NOT** constitute recycling and should not be reported.

Wheelchairs: Metal wheelchairs that are recycled count towards the MRA rate and should be included in the “Other” section of the “Metals” category in Table B1. Refurbished and reused wheelchairs do **NOT** constitute recycling and should not be reported.

White Goods: White goods include refrigerators, stoves, washing machines, dryers, water heaters, and air conditioners.

Wood Materials: Wood products, pallets, crates, barrels, and wood found in furniture that are not part of an industrial process that are composted or mulched and marketed.

Wood Shavings: Wood shavings from an industrial process that are composted/mulched count towards the MRA rate and should be included in the “Other” section of the “Compost/Mulch (Other)” category in Table B1. See “Compost/Mulch” for further details.



Volume to Weight Conversion Table

Material	Volume	Weight	Material	Volume	Weight
Aluminum cans-whole	1yd ³	63 lbs.	Lead acid batteries	1 battery	9.5-53 lbs.**
Antifreeze*	1 gallon	9.8 lbs.	Metal license tags*	1 tag	0.31 lbs.
Asphalt*	1yd ³	1,380 lbs.	Mixed wood	1yd ³	372 lbs.
Automobiles	1 car	2,052 lbs.	Motor oil*	1 gallon	7 lbs.
Cardboard-compacted	1yd ³	400 lbs.	Motor oil filters	1 filter	1 lb.
Cardboard-uncompacted	1yd ³	50-150 lbs.^	Newspaper-uncompacted	1yd ³	433 lbs.
Cardboard-baled	1yd ³	900 lbs.	Office paper-computer	1yd ³	655 lbs.
Commingle containers	1yd ³	248 lbs.	Office paper-mixed	1yd ³	435 lbs.
Computer CPU	1 CPU	35 lbs.	Paint	1 gallon	10 lbs.
Computer keyboard	1 keyboard	2.5 lbs.	Pallets	1 pallet	40 lbs.
Computer monitor	1 monitor	41 lbs.	Plastic bottles-whole	1yd ³	32 lbs.
Concrete	1yd ³	4,000 lbs.	Scrap tires-car/truck	1 tire	21/70 lbs.
Fluorescent light tubes	1 tube	0.83 lbs.	Telephone directories	1 book	4.5 lbs.
Food Waste	55 gal. drum	412 lbs.	Tin/steel cans-whole/flattened	1yd ³	150/850 lbs.
Frying grease	55 gal. drum	405 lbs.	White goods (large)	1 item	143 lbs.
Glass	1yd ³	600-1,400 lbs.+	Yard waste-compacted	1yd ³	700 lbs.
Industrial Fluids*	1 gallon	8.5 lbs.	Yard waste-uncompacted	1yd ³	320 lbs.
Laser toner cartridges	1 cartridge	3 lbs.			

- ^ Loose, unflattened cardboard weighs 50 lbs./yd³, crushed cardboard weighs closer to 150 lbs./yd³.
 * Should be included as a **Non-MRA Material**.
 + 600 lbs. for whole glass, 1,400 lbs. for manually broken glass.
 ** 9.5 lbs. for a motorcycle battery, 39 lbs. for a car battery, 53 lbs. for a truck battery.

Other helpful hints to determine recycling weights:

Aluminum cans: flattened 1yd³ weighs 340 lbs., uncompacted 1 full grocery bag weighs 1.5 lbs., uncompacted 1 case of 24 cans weighs 0.75 lbs., 32 cans weigh 1 lb.

Glass: 1 case of 24-8 oz. glass containers weigh 12 lbs., 24-12 oz. glass containers weigh 14 lbs., manually broken bottles in a 55-gallon drum weigh 300 lbs.

Gaylord box: approx. 1 yd³ (3'x3'x3')

