Sample Calculations

EXAMPLE #1: Your building has one 65-gallon container full of office paper that gets emptied once a week. What is the estimated weight of this material?

Follow the steps provided to calculate the answer.

- **STEP 1:** The size of the container is 65 gallons.
- **STEP 2:** The material is mixed paper only.
- **STEP 3:** The container is full when emptied.
- **STEP 4:** The container is emptied once per week.

FORMULA
Number of Gallons X Conversion Factor X Number of Containers = Estimated Weight

EXAMPLE
65 Gallons X 2.80 Pounds/Gallon X 1 Container
= 182 Pounds Per Week

To Convert Pounds to Tons:

182 pounds ÷ 2000 Pounds/Ton = 0.091 tons

EXAMPLE # 2: Your building collects bottles and cans separately. According to the janitorial staff, each material gets put into 33 gallon bags and taken to the local drop-off site when full, which is about once a month.

Follow the steps provided to calculate the answer.

- **STEP 1:** The size of the containers is 33 gallons.
- **STEP 2:** The material is bottles and cans.
- **STEP 3:** The container is full when emptied.
- **STEP 4:** The container is emptied once a month.

Note that these materials are collected separately, so this will require two separate calculations.

ALUMINUM CANS
0.15 Pounds Per Gallon X 33 Gallons
= 4.95 Pounds Per Month

PLASTIC BOTTLES
0.12 Pounds Per Gallon x 33 Gallons
= 3.96 Pounds Per Month

Sample Worksheet

This worksheet is provided to help you track your material's estimated weight per month. This will be the most accurate way to keep track of your data (apart from weighing the material exactly each time), as the amount of material recycled may fluctuate throughout the year. To calculate your estimated weight per month, simply multiply the numbers in columns B through F and place the total in column G. To calculate the total per year, add all the numbers in column G.

	A	B	C	D	E	F	G
Month	**Material**	**Size of Container**	**Conversion Factor**	**Fullness of Container** (Example: If bin is full put 1, if half-full put 0.5, if two-thirds full put 0.66, etc.)	**Number of Containers**	**Number of Pickups Per Month**	**Total**
Example:	***Bottles, cans, glass***	***8 yards³***	***61.55 lbs/yd³***	***0.5***	***1***	***2***	***492.4***
January							
February							
March							
April							
May							
June							
July							
August							
September							
October							
November							
December							
Yearly Total							

A Guide to

Tracking & Reporting Recycling Data

This publication is a resource from the S.C. Department of Health and Environmental Control's Office of Solid Waste Reduction and Recycling. For more information about recycling South Carolina, call **1-800-768-7348** or visit **www.scdhec.gov/recycle**.

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Tracking & Reporting: Step by Step

Estimating recycling data for reporting can be done in six easy steps. By knowing the size of your container, what material you are collecting and how often your material is collected, you can effectively calculate how much you are recycling in a given amount of time. Follow these steps to estimate your recycling data.

STEP 1: Identify the recycling container type and volume.

See examples below. If you have multiple container sizes, or if your material is source separated, you may need to do a separate calculation for each.

STEP 2: Identify material collected and correct conversion factor.

Different material and mixtures of material will weigh different amounts. If your material is source separated (e.g., paper in one bin, plastic in another), look at the "Single Material" table. If your material is commingled, look at the "Commingled Material" table and find the mixture of material that most closely resembles yours. If you collect a specific number of a particular item, then use the table that indicates the pounds per item.

Once you have identified the type/mixture of material collected, multiply the corresponding conversion factor by the size of your collection container.

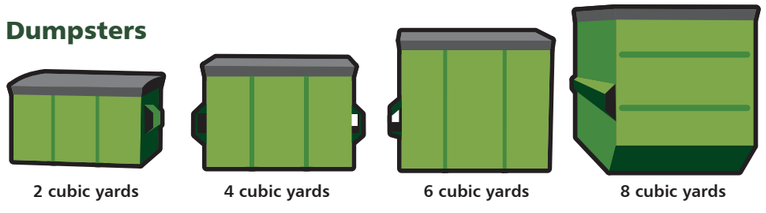
(**EXAMPLE:** If you have a 95 gallon roll-cart and you collect bottles and cans, multiply 95 gallons X 0.16 pounds/gallon.)

NOTE: If you have recycled an item that is not found in the tables below, refer to DHEC's Volume-to-Weight Conversion Factors chart.

Recycling Bins and Roll-cart Containers

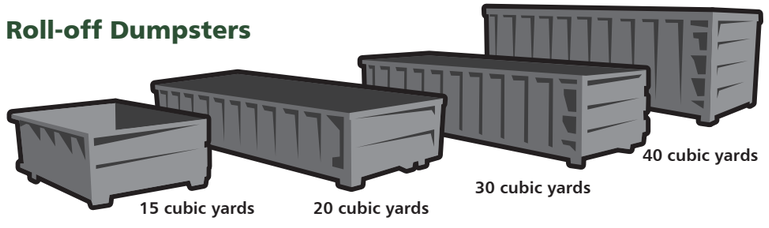
Curbside Bin **18 gallons** | Drum Bin **35 gallons** | Barrel with Lid **55 gallons** | Small Roll-cart **65 gallons** | Large Roll-cart **95 gallons**

Dumpsters



2 cubic yards | **4 cubic yards** | **6 cubic yards** | **8 cubic yards**

Roll-off Dumpsters



15 cubic yards | **20 cubic yards** | **30 cubic yards** | **40 cubic yards**

STEP 3: Note how full each container is when emptied.

Weights are easiest to calculate when the container is full before it is emptied. This is not always the case, however.

If your container is not full when emptied, estimate how full it is (e.g., half full), then multiply by the factors in the previous step.

(**EXAMPLE:** 95 gallon roll-cart X 0.16 pound/gallon X 0.5 full when emptied)

STEP 4: Note how often the container is emptied.

Contact your hauler to see how frequently your bin(s) are emptied.

This will allow you to calculate the number of pickups per month or per year.

(**EXAMPLE:** 95 gallon roll-cart X 0.16 pounds/gallon X 0.5 full when emptied X 4 pickups per month)

NOTE: If your container is a different fullness each time it is emptied or if you have different size containers, you should use a separate calculation for each and add the totals together to get the total weight per month or per year.

STEP 5: Closely track your recycling data.

It is important to keep track of your recycling data throughout the year.

If records are consistently kept, you should be able to simply total all the numbers for the fiscal year (July 1 to June 30) to prepare for reporting.

STEP 6: Report your data using Re-TRAC Connect.

State agencies and colleges/universities should report their recycling data for each fiscal year to DHEC's Office of Solid Waste Reduction and Recycling **no later than September 15**.

Data should be reported using Re-TRAC Connect at **connect.re-trac.com**.

Call **1-800-768-7348** if you have any questions.

NOTE: Only one person per organization is allowed a Re-TRAC membership for each reporting period.

Conversion Factors

If your material is commingled:

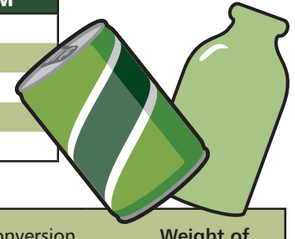
COMMINGLED MATERIALS	POUNDS PER GALLON	POUNDS PER CUBIC YARD
Cans, Bottles and Mixed Paper	0.69	139
Cans, Bottles, Steel Cans and Mixed Paper	1.01	205
Cans, Bottles, Steel Cans, Glass and Mixed Paper	1.30	262
Cans, Bottles and Glass	0.89	180
Cans, Bottles and Steel Cans	0.15	31
Cans, Bottles, Steel Cans and Glass	0.35	70
Cans and Bottles	0.16	32

If your material is source separated:

SINGLE MATERIAL	POUNDS PER GALLON	POUNDS PER CUBIC YARD
Paper (Office/Printer Paper ONLY)	2.08	420
Cardboard	0.52	106
Mixed Paper	1.21	245
Steel Cans	0.55	112
Aluminum Cans	0.22	45
Plastic Bottles	0.17	35
Glass Bottles	1.88	380

TYPICAL GARBAGE BAG VOLUMES	
SMALL BAGS	LARGE BAGS
4 gallons (bathroom)	30 gallons
8 gallons (bathroom)	33 gallons
13 gallons (kitchen)	39 gallons
—	45 gallons

MATERIAL	POUNDS PER ITEM
Aluminum Can	0.03
Carton (Milk or Juice)	0.03
Glass Bottle	0.44
Plastic Bottle	0.10
Steel Can	0.09



To get total weight:

Number of Containers (of same size)	X	Size of Container	X	Conversion Factor	=	**Weight of Material/Pickup**
Weight of Material/Pickup	X	Number of Pickups (per month or year)	=	**Total Weight of Material** (per month or year)		