



2011 Residential Recycling Report

2011 Conversion Factors And Definitions



2011 Residential Recycling Report

Conversion Factors

U.S. EPA - Standard Volume-to-Weight Conversion Factors

Category	Recyclable Material	Volume	Est. Weight (in pounds)
Antifreeze			
	Antifreeze	1 gallon	7.00
Carpet	Carpet w/out padding	1 square yard	4.00 – 5.00
Flourescent Bulbs			
	8 foot lamp	1 lamp	1.00
	4 foot lamp	1 lamp	0.65
	Misc. lengths	1 lamp	0.15 per linear ft.
Electronics	Toner cartridge	1 laser or ink jet	1.60
	Desk-top: CPU + monitor + keyboard	1 complete desk-top system	55.00
Food Scraps^A			
	Food scraps and fats	55-gallon drum	412.00
Freon Units			
	Freon containing units	1 unit	174.73
Furnishings^E			
	Foam rubber mattress	1 mattress	55.00
Glass			
	Bottles ^B :		
	Whole bottles	1 yd ³	500.00-700.00
	Semi crushed	1 yd ³	1,000.00-1,800.00
	Crushed (mechanically)	1 yd ³	1,800.00-2,700.00
	Uncrushed to manually broken	55-gallon drum	300.00
	Refillable whole bottles ^C :		
	Refillable beer bottles	1 case = 24 bottles	10.00-14.00
	Refillable soft drink	1 case = 24 bottles	12.00-22.00
	8 oz glass container	1 case = 24 bottles	12.00
	Misc. containers	33-gallon bag	95.00



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Category	Recyclable Material	Volume	Est. Weight (in pounds)
Lead-Acid Batteries			
	Car ^D	1 battery	39.40
	Truck ^E	1 battery	53.30
	Motorcycle ^E	1 battery	9.50
Metals	<i>Also see attached chart</i>		
	Aluminum cans ^F :		
	Whole	1 yd ³	50.00-75.00
	Compacted (manually)	1 yd ³	250.00-430.00
	Uncompacted	1 full grocery bag	1.50
		1 case = 24 cans	0.90
	Whole & compacted	1 yd ³	91.40
	Ferrous (tin coated steel cans) ^G :		
	Whole	1 yd ³	150.00
	Flattened	1 yd ³	850.00
	Whole	1 case = 6 cans	22.00
	Major appliances ^E :		
	Air conditioners-room	1 unit	64.20
	Dishwashers	1 unit	92.00
	Clothes dryers	1 unit	130.00
	Freezers	1 unit	193.00
	Microwave ovens	1 unit	50.00
	Ranges	1 unit	181.10
	Refrigerators	1 unit	267.00
	Clothes washers	1 unit	177.00
	Water heaters	1 unit	131.00
	Fire hydrants	1 unit	500.00
Motor Oil			
	Motor oil	1 gallon	8.00
	Used oil filter	1 car filter	1.10
Municipal Solid Waste^M	<i>Also see attached calculations</i>		
	Residential waste uncompacted @ curb	1 yd ³	150.00-300.00
	Commercial-industrial waste uncompacted	1 yd ³	300.00-600.00
	MSW compacted in truck	1 yd ³	500.00-1,000.00
	MSW landfill density	1 yd ³	750.00-1,250.00



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Category	Recyclable Material	Volume	Est. Weight (in pounds)
Paper	Newspaper ^F :		
	Uncompacted	1 yd ³	360.00-505.00
	Compacted/baled	1 yd ³	720.00-1,000.00
	12 inch stack	-----	35.00
	Old corrugated ^F :		
	Uncompacted	1 yd ³	50.00-150.00
	Compacted	1 yd ³	300.00-500.00
	Baled	1 yd ³	700.00-1,100.00
	Computer paper ^F :		
	Stacked uncompacted	1 yd ³	655.00
	Compacted/baled	1 yd ³	1,310.00
	1 case	2,800 sheets	42.00
	White ledger ^F :		
	Stacked uncompacted	1 yd ³	375.00-465.00
	Stacked compacted	1 yd ³	755.00-925.00
	Crumpled uncompacted	1 yd ³	110.00-205.00
	Crumpled compacted	1 yd ³	325.00
	Ream of 20# bond: 8-1/2 in x 11 in	1 ream = 500 sheets	5.00
	Ream of 20# bond: 8-1/2 in x 14 in	1 ream = 500 sheets	6.40
	White ledger pads	1 case = 72 pads	38.00
	Tab cards ^F :		
	Uncompacted	1 yd ³	605.00
	Compacted/baled	1 yd ³	1,215.00-1,350.00
	Miscellaneous paper:		
	Yellow legal pads ^F	1 case = 72 pads	38.00
	Colored message pads ^F	1 carton = 144 pads	22.00
	Mixed ledger/office paper ^F :		
Flat uncompacted	1 yd ³	380.00	
Flat compacted	1 yd ³	755.00	
Crumpled uncompacted	1 yd ³	110.00-205.00	
Crumpled compacted	1 yd ³	610.00	



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Category	Recyclable Material	Volume	Est. Weight (in pounds)
Plastic^J			
	PETE soda bottles:		
	Whole bottles uncompact	1 yd ³	30.00-40.00
	Whole bottled compacted	1 yd ³	515.00
	Whole bottles uncompact	gaylord	40.00-53.00
	Baled	30 in x 62 in	500.00-550.00
	Misc. bottles	33-gallon bag	6.65
	Granulated	semi-load	30,000.00
	Granulated	gaylord	700.00-750.00
	8 bottles (2 L size)	16 L	1.00
	HDPE dairy:		
	Whole uncompact	1 yd ³	24.00
	Whole compacted	1 yd ³	270.00
	Baled	32 in x 60 in	400.00-500.00
	HDPE mixed:		
	Baled	32 in x 60 in	900.00
	Granulated	gaylord	800.00-1,000.00
	Granulated	Semi-load	42,000.00
	Other plastics:		
	Uncompact	1 yd ³	50.00
	Compact/baled	1 yd ³	400.00-700.00
	Mixed PETE and HDPE dairy:		
	Whole uncompact	1 yd ³	32.00
	Film:		
	Baled	Semi-load	44,000.00
	Baled	30 in x 42 in x 48 in	1,100.00
	Plastic drums	55 gallons	30.00
Telephone Directories			
	Telephone directory	1 directory	8.00
	Telephone directory	1 yd ³	250.00
Textiles^I			
	Mixed textiles	1 yd ³	175.00



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Category	Recyclable Material	Volume	Est. Weight (in pounds)
Tires			
	Car tires:		
	Whole tire ^E	1 tire	21.00
	Crumb rubber ^K	1 tire	12.00
	Truck tires:		
	Whole tire ^E	1 tire	70.00
	Crumb rubber ^K	1 tire	60.00
	Equipment tires:		
	Whole tire	1 tire	99.00
Wood			
	Wood chips ^L	1 yd ³	625.00
	Pallets ^F	1 pallet	30.00-100.00
	Logs:		
	16" x 16" x 4' log	1 log	289.60
	8" x 8" x 4' log	1 log	72.41
Yard Trimmings^F			
	Mixed yard waste uncompactd	1 yd ³	416.67
	Mixed yard waste compacted	1 yd ³	675.00-879.00
	Grass clippings:		
	Uncompactd	1 yd ³	350.00-450.00
	Compactd	1 yd ³	550.00-1,500.00
	Leaves:		
	Uncompactd	1 yd ³	200.00-250.00
	Compactd	1 yd ³	300.00-450.00
	Vacuumed	1 yd ³	350.00

Conversion Table Sources:

^AInformation obtained from Washington State.

^BDraft National Recycling Coalition Measurement Standards and Reporting Guidelines presented to NRC membership in October 31, 1989.

^CPersonal communication with a representative from Allwaste in November 6, 1995.

^DBattery Council International, 1995 and 1994 National Recycling Rate Study.

^EU.S. EPA 1995 Methodology for Characterization of Municipal Solid Waste in the United States: 1994 Update.

^FU.S. EPA 1993 Business Guide for Reducing Solid Waste.

^GPersonal communication with a representative from the Steel Institute, November 1, 1995.

^HInformation obtained from New Jersey and New York States.

^IInformation obtained from Massachusetts State.

^JPersonal communication with a representative from the American Plastics Council, November 2, 1995.

^KPersonal communication with a representative from the Scrap Tire Management Council, November 6, 1995.

^LInformation obtained from Northeast Forest Products, Martin Mulch Company and the Solid Waste Association of North America.

^MSolid Waste Association of North America, Manager of Landfill Operations Training and Certification Course.



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Conversion Factors

Calculating Disposal Weights

According to the *US EPA's Municipal Solid Waste in The United States: 2000 Facts and Figures*, discards after recycling equaled 3.2 pounds per person per day in 2000.

Therefore,

1. Community "Green" has a population of 449 people
2. 449 people x 3.2 pounds per person per day disposed = 1,436.80 pounds daily
3. 1,436.80 pounds daily x 356 days annually = 524,432.00 pounds annually
4. 524,432.00 pounds annually / 2,000 pounds in a ton = 262.22 tons annually disposed

Calculating the Percentage of Grasscycling in Your Community

According to the Ohio EPA, the best way to ascertain the amount of grasscycling that is occurring within your community is to have your residents complete a yard waste survey.

According to the *US EPA's Municipal Solid Waste in The United States: 2000 Facts and Figures*, yard waste constituted 12.1% of generation in 2000.

1. Calculate all of the tons recycled for the year, with the exception of the yard waste.
2. Calculate/obtain your disposal tonnage for the year.
3. Calculate generation.
Generation tonnage = Recycling tonnage + Disposal tonnage
4. Generation tonnage X .121 (12.1%) = Total grasscycling for the entire community (annual tonnage)
5. If your entire community does not participate in do-it-yourself management of yard waste, then you will need to calculate the per household tonnage of grasscycling.
Per household tonnage of grasscycling =
Total grasscycling for the entire community / Number of households
Then,
Per household tonnage of grasscycling x Number of household in your community that participate in do-it-yourself management of yard waste
6. Add this amount to the Residential Recycling Report and re-calculate the tons of materials recycled.

Calculating the Weight of Logs Re-used, Recycled and Composted in Your Community

Assuming that you know the cubic yards of logs, then



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1. Calculate the cubic inch capacity of the vehicle
(i.e., 4 cubic yard bed = 72" x 72" x 36")
2. Calculate how many logs would fit in the bottom of the bed of this truck
(i.e., 4 cubic yard bed will hold approximately 8 logs - 16" wide by 4'long)
3. Calculate how many layers of logs the truck will hold
4. (i.e., 4 cubic yard bed will hold 3 layers of these logs)
5. Calculate the total number of logs held by this truck bed
6. (i.e., 8 logs per layer x 3 layers = 24 logs)
7. If a truck has a 4 cubic yard capacity, divide this into the total amount of cubic yards of logs
8. (i.e., 230 cubic yards of logs / 4 cubic yard trucks = 57.5 trucks of logs)
9. Calculate the total number of logs
(i.e., 57.5 truck loads x 24 logs per truck load = 1,380 logs)
10. Calculate the weight of the logs
11. (i.e., 1,380 logs x 289.60 pounds for an average log 16" x 16" x 4'=399,648 pounds)
12. Convert log pounds to tons
(i.e., 399,648 pounds / 2,000 pounds in a ton = 199.82 tons of logs)



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Conversion Factors

Log Weight Calculator at WOODWEB

(http://www.woodweb.com/cgi-bin/calculators/calc.pl?calculator=log_weight)

Species	Small End Diameter	Large End Diameter	Length	Quantity	Estimated Weight
Alder, Red	16.00	16.00	4.00	1.00	226.00
Alder, Red	8.00	8.00	4.00	1.00	57.00
Apple	16.00	16.00	4.00	1.00	374.00
Apple	8.00	8.00	4.00	1.00	93.00
Ash, Black	16.00	16.00	4.00	1.00	348.00
Ash, Black	8.00	8.00	4.00	1.00	87.00
Ash, Green	16.00	16.00	4.00	1.00	325.00
Ash, Green	8.00	8.00	4.00	1.00	81.00
Aspen, Bigtooth	16.00	16.00	4.00	1.00	220.00
Aspen, Bigtooth	8.00	8.00	4.00	1.00	55.00
Aspen, Quaking	16.00	16.00	4.00	1.00	214.00
Aspen, Quaking	8.00	8.00	4.00	1.00	54.00
Basswood	16.00	16.00	4.00	1.00	196.00
Basswood	8.00	8.00	4.00	1.00	49.00
Beech, American	16.00	16.00	4.00	1.00	343.00
Beech, American	8.00	8.00	4.00	1.00	86.00
Birch, Paper	16.00	16.00	4.00	1.00	295.00
Birch, Paper	8.00	8.00	4.00	1.00	74.00
Birch, Sweet	16.00	16.00	4.00	1.00	368.00
Birch, Sweet	8.00	8.00	4.00	1.00	92.00
Birch, Yellow	16.00	16.00	4.00	1.00	337.00
Birch, Yellow	8.00	8.00	4.00	1.00	84.00
Buckeye	16.00	16.00	4.00	1.00	202.00
Buckeye	8.00	8.00	4.00	1.00	51.00
Butternut	16.00	16.00	4.00	1.00	221.00
Butternut	8.00	8.00	4.00	1.00	55.00
Cherry	16.00	16.00	4.00	1.00	288.00
Cherry	8.00	8.00	4.00	1.00	72.00
Chestnut, American	16.00	16.00	4.00	1.00	245.00
Chestnut, American	8.00	8.00	4.00	1.00	61.00
Cottonwood	16.00	16.00	4.00	1.00	190.00
Cottonwood	8.00	8.00	4.00	1.00	47.00
Dogwood	16.00	16.00	4.00	1.00	392.00
Dogwood	8.00	8.00	4.00	1.00	98.00
Elm, American	16.00	16.00	4.00	1.00	282.00
Elm, American	8.00	8.00	4.00	1.00	70.00
Elm, Rock	16.00	16.00	4.00	1.00	349.00
Elm, Rock	8.00	8.00	4.00	1.00	87.00
Elm, Slippery	16.00	16.00	4.00	1.00	294.00



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Elm, Slippery	8.00	8.00	4.00	1.00	74.00
Hackberry	16.00	16.00	4.00	1.00	300.00
Hackberry	8.00	8.00	4.00	1.00	75.00
Hickory, Bitternut (Pecan)	16.00	16.00	4.00	1.00	367.00
Hickory, Bitternut (Pecan)	8.00	8.00	4.00	1.00	92.00
Hickory, Mockernut	16.00	16.00	4.00	1.00	392.00
Hickory, Mockernut	8.00	8.00	4.00	1.00	98.00
Hickory, Pignut	16.00	16.00	4.00	1.00	395.00
Hickory, Pignut	8.00	8.00	4.00	1.00	99.00
Hickory, Shagbark	16.00	16.00	4.00	1.00	392.00
Hickory, Shagbark	8.00	8.00	4.00	1.00	98.00
Hickory, Shellbark	16.00	16.00	4.00	1.00	379.00
Hickory, Shellbark	8.00	8.00	4.00	1.00	95.00
Holly, American	16.00	16.00	4.00	1.00	306.00
Holly, American	8.00	8.00	4.00	1.00	77.00
Hophornbeam, Eastern	16.00	16.00	4.00	1.00	386.00
Hophornbeam, Eastern	8.00	8.00	4.00	1.00	96.00
Locust, Black	16.00	16.00	4.00	1.00	404.00
Locust, Black	8.00	8.00	4.00	1.00	101.00
Madrone, Pacific	16.00	16.00	4.00	1.00	355.00
Madrone, Pacific	8.00	8.00	4.00	1.00	89.00
Maple, Big leaf	16.00	16.00	4.00	1.00	270.00
Maple, Big leaf	8.00	8.00	4.00	1.00	67.00
Maple, Red	16.00	16.00	4.00	1.00	300.00
Maple, Red	8.00	8.00	4.00	1.00	75.00
Maple, Silver	16.00	16.00	4.00	1.00	270.00
Maple, Silver	8.00	8.00	4.00	1.00	67.00
Maple, Black	16.00	16.00	4.00	1.00	318.00
Maple, Black	8.00	8.00	4.00	1.00	80.00
Maple, Sugar	16.00	16.00	4.00	1.00	343.00
Maple, Sugar	8.00	8.00	4.00	1.00	86.00
Oak, Black	16.00	16.00	4.00	1.00	343.00
Oak, Black	8.00	8.00	4.00	1.00	86.00
Oak, Laurel	16.00	16.00	4.00	1.00	343.00
Oak, Laurel	8.00	8.00	4.00	1.00	86.00
Oak, Northern Red	16.00	16.00	4.00	1.00	343.00
Oak, Northern Red	8.00	8.00	4.00	1.00	86.00
Oak, Pin	16.00	16.00	4.00	1.00	355.00
Oak, Pin	8.00	8.00	4.00	1.00	89.00
Oak, Scarlet	16.00	16.00	4.00	1.00	368.00
Oak, Scarlet	8.00	8.00	4.00	1.00	92.00
Oak, Southern Red	16.00	16.00	4.00	1.00	318.00
Oak, Southern Red	8.00	8.00	4.00	1.00	80.00
Oak, Water	16.00	16.00	4.00	1.00	343.00



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Oak, Water	8.00	8.00	4.00	1.00	86.00
Oak, Willow	16.00	16.00	4.00	1.00	343.00
Oak, Willow	8.00	8.00	4.00	1.00	86.00
Oak, Bur	16.00	16.00	4.00	1.00	355.00
Oak, Bur	8.00	8.00	4.00	1.00	89.00
Oak, Chestnut	16.00	16.00	4.00	1.00	349.00
Oak, Chestnut	8.00	8.00	4.00	1.00	87.00
Oak, Live	16.00	16.00	4.00	1.00	490.00
Oak, Live	8.00	8.00	4.00	1.00	122.00
Oak, Overcup	16.00	16.00	4.00	1.00	349.00
Oak, Overcup	8.00	8.00	4.00	1.00	87.00
Oak, Post	16.00	16.00	4.00	1.00	367.00
Oak, Post	8.00	8.00	4.00	1.00	92.00
Oak, Swamp Chestnut	16.00	16.00	4.00	1.00	367.00
Oak, Swamp Chestnut	8.00	8.00	4.00	1.00	92.00
Oak, White	16.00	16.00	4.00	1.00	367.00
Oak, White	8.00	8.00	4.00	1.00	92.00
Persimmon	16.00	16.00	4.00	1.00	392.00
Persimmon	8.00	8.00	4.00	1.00	98.00
Sweetgum	16.00	16.00	4.00	1.00	282.00
Sweetgum	8.00	8.00	4.00	1.00	70.00
Sycamore	16.00	16.00	4.00	1.00	282.00
Sycamore	8.00	8.00	4.00	1.00	70.00
Tanoak	16.00	16.00	4.00	1.00	355.00
Tanoak	8.00	8.00	4.00	1.00	89.00
Tupelo, Black	16.00	16.00	4.00	1.00	282.00
Tupelo, Black	8.00	8.00	4.00	1.00	70.00
Tupelo, Water	16.00	16.00	4.00	1.00	282.00
Tupelo, Water	8.00	8.00	4.00	1.00	70.00
Walnut	16.00	16.00	4.00	1.00	312.00
Walnut	8.00	8.00	4.00	1.00	78.00
Willow, Black	16.00	16.00	4.00	1.00	220.00
Willow, Black	8.00	8.00	4.00	1.00	55.00
Yellow-Poplar	16.00	16.00	4.00	1.00	245.00
Yellow-Poplar	8.00	8.00	4.00	1.00	61.00
Baldcypress	16.00	16.00	4.00	1.00	257.00
Baldcypress	8.00	8.00	4.00	1.00	64.00
Cedar, Alaska	16.00	16.00	4.00	1.00	257.00
Cedar, Alaska	8.00	8.00	4.00	1.00	64.00
Cedar, Atlantic White	16.00	16.00	4.00	1.00	190.00
Cedar, Atlantic White	8.00	8.00	4.00	1.00	47.00
Cedar, Eastern Red	16.00	16.00	4.00	1.00	270.00
Cedar, Eastern Red	8.00	8.00	4.00	1.00	67.00
Cedar, Incense	16.00	16.00	4.00	1.00	214.00



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Cedar, Incense	8.00	8.00	4.00	1.00	54.00
Cedar, Northern White	16.00	16.00	4.00	1.00	178.00
Cedar, Northern White	8.00	8.00	4.00	1.00	44.00
Cedar, Port-Orford	16.00	16.00	4.00	1.00	239.00
Cedar, Port-Orford	8.00	8.00	4.00	1.00	60.00
Cedar, Western Red	16.00	16.00	4.00	1.00	190.00
Cedar, Western Red	8.00	8.00	4.00	1.00	47.00
Douglas-fir, Coast Type	16.00	16.00	4.00	1.00	276.00
Douglas-fir, Coast Type	8.00	8.00	4.00	1.00	69.00
Douglas-fir, Interior North	16.00	16.00	4.00	1.00	276.00
Douglas-fir, Interior North	8.00	8.00	4.00	1.00	69.00
Fir, Balsam	16.00	16.00	4.00	1.00	202.00
Fir, Balsam	8.00	8.00	4.00	1.00	51.00
Fir, Grand	16.00	16.00	4.00	1.00	214.00
Fir, Grand	8.00	8.00	4.00	1.00	54.00
Fir, Noble	16.00	16.00	4.00	1.00	227.00
Fir, Noble	8.00	8.00	4.00	1.00	57.00
Fir, Pacific Silver	16.00	16.00	4.00	1.00	245.00
Fir, Pacific Silver	8.00	8.00	4.00	1.00	61.00
Fir, Subalpine	16.00	16.00	4.00	1.00	190.00
Fir, Subalpine	8.00	8.00	4.00	1.00	47.00
Fir, White	16.00	16.00	4.00	1.00	226.00
Fir, White	8.00	8.00	4.00	1.00	57.00
Hemlock, Eastern	16.00	16.00	4.00	1.00	233.00
Hemlock, Eastern	8.00	8.00	4.00	1.00	58.00
Hemlock, Western	16.00	16.00	4.00	1.00	257.00
Hemlock, Western	8.00	8.00	4.00	1.00	64.00
Larch, Western	16.00	16.00	4.00	1.00	294.00
Larch, Western	8.00	8.00	4.00	1.00	74.00
Pine, Eastern White	16.00	16.00	4.00	1.00	208.00
Pine, Eastern White	8.00	8.00	4.00	1.00	52.00
Pine, Lodgepole	16.00	16.00	4.00	1.00	233.00
Pine, Lodgepole	8.00	8.00	4.00	1.00	58.00
Pine, Ponderosa	16.00	16.00	4.00	1.00	233.00
Pine, Ponderosa	8.00	8.00	4.00	1.00	58.00
Pine, Red	16.00	16.00	4.00	1.00	251.00
Pine, Red	8.00	8.00	4.00	1.00	63.00
Pine, Loblolly	16.00	16.00	4.00	1.00	288.00
Pine, Loblolly	8.00	8.00	4.00	1.00	72.00
Pine, Longleaf	16.00	16.00	4.00	1.00	331.00
Pine, Longleaf	8.00	8.00	4.00	1.00	83.00
Pine, Shortleaf	16.00	16.00	4.00	1.00	288.00
Pine, Shortleaf	8.00	8.00	4.00	1.00	72.00
Pine, Sugar	16.00	16.00	4.00	1.00	208.00



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Pine, Sugar	8.00	8.00	4.00	1.00	52.00
Pine, Western White	16.00	16.00	4.00	1.00	214.00
Pine, Western White	8.00	8.00	4.00	1.00	54.00
Redwood, Old Growth	16.00	16.00	4.00	1.00	233.00
Redwood, Old Growth	8.00	8.00	4.00	1.00	58.00
Redwood, Second Growth	16.00	16.00	4.00	1.00	208.00
Redwood, Second Growth	8.00	8.00	4.00	1.00	52.00
Spruce, Black	16.00	16.00	4.00	1.00	233.00
Spruce, Black	8.00	8.00	4.00	1.00	58.00
Spruce, Englemann	16.00	16.00	4.00	1.00	202.00
Spruce, Englemann	8.00	8.00	4.00	1.00	51.00
Spruce, Red	16.00	16.00	4.00	1.00	226.00
Spruce, Red	8.00	8.00	4.00	1.00	57.00
Spruce, Sitka	16.00	16.00	4.00	1.00	226.00
Spruce, Sitka	8.00	8.00	4.00	1.00	57.00
Tamarack	16.00	16.00	4.00	1.00	300.00
Tamarack	8.00	8.00	4.00	1.00	75.00

Average weight of 16" x 16" x 4' log = 289.60 pounds

Average Weight of 8" x 8" 4' log = 72.41 pounds



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Conversion Factors

Metals

(<http://www.ciwmb.ca.gov/LGLibrary/DSG/lmetal.htm>)

Aluminum	Size/Amount	Study	Pounds
Aluminum foil, loose	1 cubic yard	Tellus	48.10
Aluminum scrap, cubed	1 cubic yard	Tellus	424.00
Aluminum scrap, whole	1 cubic yard	Tellus	175.00
Aluminum cans, uncrushed	1 case = 24 cans	U.S. EPA	0.89
Aluminum cans, crushed	13 gallons	U.S. EPA corr.	7.02
Aluminum cans, crushed	33 gallons	U.S. EPA	17.82
Aluminum cans, crushed	39 gallons	U.S. EPA	31.06
Aluminum cans, crushed & uncrushed mix	1 cubic yard	Tellus	91.40
Aluminum cans, uncrushed	1 full grocery bag	U.S. EPA	1.50
Aluminum cans, uncrushed	13 gallons	U.S. EPA	2.21
Aluminum cans, uncrushed	33 gallons	U.S. EPA	5.61
Aluminum cans, uncrushed	39 gallons	U.S. EPA	6.63
Aluminum cans (whole)	1 cubic yard	U.S. EPA	65.00
Aluminum, chips	1 cubic foot	FEECO	7–15
Aluminum/tin Cans commingled—uncrushed	33 gallon	USEPA	11.55
Ferrous Metal			
Metal scrap	55 gallon	U.S. EPA	226.50
Metal scrap	cubic yard	U.S. EPA	906.00
Metal, car bumper	each	U.S. EPA	40.00
Paint can	5 gallon	U.S. EPA	2.21
Radiator, ferrous	each	U.S. EPA	20.00
Hanger (adult)	each	CIWMB	0.14
Hanger (child)	each	CIWMB	0.09
Tin can, ferrous	#2.5	U.S. EPA	0.13
Tin can, ferrous	#5	U.S. EPA	0.28
Tin can, ferrous	#10	U.S. EPA	0.77
Tin coated steel cans	1 cubic yard	U.S. EPA	850.00
Tin coated steel cans	1 case (6 #10 cans)	U.S. EPA	22.00
Tin, tuna can (3/4 of #10), ferrous	each	U.S. EPA	0.58
Tin, cat food can, ferrous	8 oz.	U.S. EPA	0.14
Tin, dog food can, large, ferrous	22 oz.	U.S. EPA	0.22
Tin, dog food can, ferrous	15.5 oz.	U.S. EPA	0.11
Tin, cast	1 cubic foot	FEECO	455.00
Cast iron chips or borings	1 cubic foot	FEECO	130–200
Iron cast ductile	1 cubic foot	FEECO	444.00
Iron, ore	1 cubic foot	FEECO	100–200
Iron, wrought	1 cubic foot	FEECO	480.00
Steel, shavings	1 cubic foot	FEECO	58–65
Steel, solid	1 cubic foot	FEECO	487.00



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Steel, trimmings	1 cubic foot	FEECO	75–50
Brass, cast	1 cubic foot	FEECO	519.00
Brass, scrap	1 cubic yard	Tellus	906.43
Bronze,	1 cubic foot	FEECO	552.00
Copper fittings, loose	1 cubic yard	Tellus	1,047.62
Copper pipe, whole	1 cubic yard	Tellus	210.94
Copper, cast	1 cubic foot	FEECO	542.00
Copper, ore	1 cubic foot	FEECO	120–150
Copper, scrap	1 cubic yard	Tellus	1,093.52
Copper, wire, whole	1 cubic yard	Tellus	337.50
Chrome ore (chromite)	1 cubic foot	FEECO	125–140
Lead, commercial	1 cubic foot	FEECO	710.00
Lead, ores	1 cubic foot	FEECO	200–270
Lead, scrap	1 cubic yard	Tellus	1,603.84
Nickel, ore	1 cubic foot	FEECO	150.00
Nickel, rolled	1 cubic foot	FEECO	541.00

Source acronyms used

CIWMB:	California Integrated Waste Management Board
FEECO:	FEECO Incorporated
Tellus:	Tellus Institute, Boston, Massachusetts
U.S. EPA:	United States Environmental Protection Agency (Business Users Guide)

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Definitions

Antifreeze - Any liquid, new or used, that is added to the fluids of a vehicle, system or equipment to prevent freezing.

Apartment - Residential units that are grouped together in apartment buildings or houses. The residents of these units do not have access to curbside recycling or curbside garbage collection.

Bag - The officially designated plastic or paper bag into which the residential producer places recyclable materials.

Batteries - Any battery, new or used. Lead acid batteries (wet cell) and household batteries (dry cell) are to be included in this category.

Bin/Bucket - The officially designated recycling bin or recycling bucket into which the residential producer places recyclable materials.

Brown Kraft Bag - A brown paper grocery bag or other brown paper bag.

Carpet Padding - Material utilized beneath carpeting to provide a cushion. The material can be new or used.

Centralized Containers - A method of collecting recyclable materials where individuals transport the materials to centralized recycling location within the apartment building/complex.

Commercial Wastes – Solid Wastes resulting from business and institutional activities. This category includes shopping centers, stores, banks, theaters, gas stations, medical facilities, business offices, motels, and similar service establishments. Institutional activities include government and non-profit offices, schools, prisons, religious facilities, parks, and a variety of other activities that is not residential or industrial. ¹

Compost(ed) - The controlled microbial decomposition of organic matter, such as food scraps and yard wastes, in the presence of oxygen into a humus or soil-like material. ¹

Construction & Demolition Debris – Those materials resulting from the alteration, construction, destruction, rehabilitation, or repair of manmade physical structure, includes houses, buildings, or roadways. Construction and demolition debris does not include solid wastes or hazardous wastes, materials from mining operations, non-toxic fly ash, spent non-toxic foundry sand or slag. ¹

Curb - That portion of the right-of-way adjacent to paved or traveled roadways, including the end of a driveway, curb line or alley line.

Drop-Off - A method of collecting recyclable materials where individuals transport the materials to a designated collection site within the community.

Exempt Waste – Material excluded from the definition of solid waste in ORC 3734.01(E) including slag, uncontaminated earth, non-toxic fly ash, spent non-toxic foundry sand, and material from mining, construction or demolition operations. Please note that non-toxic fly ash and non-toxic foundry sand means fly ash and spent foundry sand determined to be non-toxic in accordance with Ohio EPA Division of Surface Water Policy 0400.007 ¹

Fabrics/Textile/Clothing - Any discarded material made from fibers or threads by weaving, knitting, felting, etc. Clothing, draperies, fabric, etc. are included in this category.

Glass - Food and beverage containers made of brown, green or clear glass. This material does not include ceramics and mirror glass.



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Definitions (continued)

Household Hazardous Waste (HHW) – Materials used in the home/apartment such as cleaners, paints, solvents, pesticides, used oil, batteries, and other automotive products that potentially can cause injuries to refuse workers, damage to equipment, and/or harm to the environment if disposed in the solid waste stream. HHW typically exhibits one or more characteristics of hazardous wastes, but is exempted from regulation as a hazardous waste because of generation by households. ¹

Incineration – The controlled process by which solid wastes are burned and changed into gases and ash. ¹

Industrial Solid Waste – Includes any non-hazardous solid waste, which results from, or is the residue of an industrial process. Some examples are industrial sludges, paint, petrochemicals, fly ash, bottom ash, slag, and foundry sand. Waste streams such as fly ash, bottom ash, slag and foundry sand are characterized as solid waste in accordance with Ohio EPA Division of Surface Water policy 0400.007. Industrial solid waste includes both industrial process wastes such as sludges, trimmings, and filter cake, and industrial non-process wastes such as cafeteria and packaging wastes. ¹

Internal facility recycling - The recycling of materials by a community's administration, agencies, departments or facilities.

Metals - Food, beverage and other containers made of aluminum, bi-metal or steel. Scrap metal and white goods may also be included in this category.

Motor Oil - Any new or used vehicle or equipment oil

Newspaper/newsprint - All the materials contained within a newspaper.

Paper - Cardboard, newsprint, office paper, mixed paper, junk mail, phone books and magazines are included in this category.

Plastics - Polyethylene (PETE #1), such as pop bottles, and HDPE (#2), such as milk jugs and detergent bottles, are included in this category.

Private Contractor - The person, partnership or corporation, under contract with the community, to collect the recyclables from residential units, drop-off locations or community departments/locations.

Recyclables - Products or materials that can be collected, separated and processed to be used as raw materials in the manufacture of new products. This term shall refer to the recyclable materials collected within your community from a single family/multi-family unit, apartment unit or drop-off location. These materials may include, but are not limited to, glass, aluminum and steel containers, magazines, phone books, junk mail, mixed paper, newspaper, #1 and #2 plastics, cardboard, yard waste, white goods, etc.

Residential unit - A Residential Unit shall be considered to be a single family residence, multi-family residence (having in excess of 1 unit), apartment, condominium or cluster home, which has either water or domestic light and power services supplied thereto.

Residential Wastes – Solid wastes resulting from residential dwellings such as single-family homes, apartment buildings, condominiums, cooperatives, and mobile homes. Domiciles such as nursing homes, campgrounds, and other types of group quarters and institutions should be considered generating commercial waste. ¹

Reuse – The reuse of waste means the re-utilization of a material in an environmentally sound manner that will not result in a hazard to human health or the environment. ¹

Set-Out Rate – The National Recycling Coalition defines a set-out rate as the number of households that set out materials on their assigned collection day, divided by the total number of households served. A set-out rate is a measurement commonly used in assessing curbside collection programs. ¹



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Definitions (continued)

Single family and multi-family units - Residential Units, excluding apartments, which have access to the curbside collection of recyclables.

Solid Waste - Unwanted residual solid or semi-solid materials as results from industrial, commercial, agricultural and community operations, excluding earth or material from construction, mining or demolition operations, or other waste materials of the type that would normally be included in demolition debris, non-toxic fly ash, spent non-toxic foundry sand and slag and other substances that are not harmful or inimical to public health. It includes, but is not limited to, garbage, tires, combustible and non-combustible material, street dirt and debris. Solid waste does not include any material that is an "infectious waste" or a "hazardous waste."¹

Source Reduction – Source reduction means any effort to reduce, at the source, the quantity of waste generated. It includes reducing the amount of materials entering the waste stream by voluntary or mandatory programs to eliminate the initial generation of waste.¹

Waste Generation – This term refers to amount (weight, volume, or percentage of the overall waste stream) of materials and products as they enter the waste stream and before materials recovery, composting, or combustion takes place.¹

Waste Reduction – As used in the *District Solid Waste Management Plan Format (1996)*, this term means source reduction, recycling, MSW composting, incineration, and resource recovery.¹

White Goods - Discarded kitchen and other large appliances (washing machines, clothes dryers, etc.). May include fencing, swing sets, buckets, television sets, and furniture.

Yard wastes - Leaves, grass clippings, weeds, Holiday trees, brushes and brush and branch clippings.

¹ *District Solid Waste Management Plan Format (1996), Appendix AA: Glossary*