

US EPA ARCHIVE DOCUMENT

## A

# Converting to the Standard Recycling Rate

*Use this worksheet to calculate a recycling rate based on the standard equation. The standard recycling rate incorporates standard definitions of municipal solid waste (MSW) and recycling in addition to the following universal equation:*

$$\text{Municipal Solid Waste Recycling Rate (\%)} = \frac{\text{Total MSW Recycled}}{\text{Total MSW Generated (MSW Recycled + MSW Disposed Of)}} \times 100$$

*This worksheet will help you subtract from your current recycling rate those waste management activities and waste materials that are outside the scope of the standard recycling rate. In addition, those waste materials and recycling activities not included in your current rate, but included in the standard rate and for which you have data, can be added using this worksheet.*

## How You Will Use The Information Obtained:

- After converting to the standard recycling rate, you will be able to make consistent comparisons of your recycling efforts and the efforts of others.

## Who Should Use This Worksheet:

- State and local governments that currently have a recycling measurement system in place and have previously calculated a recycling rate.

## What You Will Need:

- A list of the types of solid waste and recyclables included in your current recycling rate.
- Your definitions of the following terms:
  - Municipal Solid Waste
  - Recyclable materials (e.g., yard trimmings, tires, ferrous metal)
  - Recycling
- Standard definitions of the above terms from the Glossary (found on page 49 of the Guide).
- Scope of Materials Included in the Standard MSW Recycling Rate table (Table A, found on page 11 of the Guide).
- Scope of Activities Included in the Standard MSW Recycling Rate table (Table B, found on page 13 of the Guide).

## Important Tips:

- ✓ In order to be consistent with the standard recycling rate, only solid waste defined as municipal solid waste in the attached Scope of MSW table can be included when calculating the amount of waste disposed of and recycled.
- ✓ Only MSW recycled according to the waste management activities outlined in the attached Scope of MSW Recycling table can be included when calculating the amount of waste recycled.

# Converting to the Standard Recycling Rate

## I. Calculating Waste Disposal

**IA.** Using the Scope of MSW table and the definition of MSW found in the Glossary, determine if there are any waste materials not included in your current recycling rate. Add those waste materials **for which you have current disposal data** and that are defined as MSW in the standard recycling rate. Enter the amount disposed of for these wastes below. Remember, add materials only if you already have current disposal data available.

<b>ADDITIONAL MSW</b>	<b>AMOUNT DISPOSED OF (tons)</b>
<b>TOTAL ADDITIONAL MSW (tons)</b>	

**IB.** Only MSW can be included in the standard recycling rate. The wastes listed in the table below are excluded from the definition of MSW in the standard recycling rate. Using your most recent data on waste disposal, fill in the annual amount disposed of for each excluded waste included in your current recycling rate. Refer to the Glossary and Scope of MSW table for further clarification of the terms used here. If you are unable to disaggregate these excluded wastes from your current data, use Worksheet B2, Part 3, to estimate the total amount of MSW generated.

<b>IB. MATERIALS EXCLUDED FROM MSW</b>	<b>ANNUAL AMOUNT DISPOSED OF (tons)</b>
Abatement Debris	
Agricultural Waste	
Asphalt	
Batteries From Aircraft, Military Vehicles, Boats, Heavy-Duty Trucks, and Tractors	
Combustion Ash	
Concrete	
Construction and Demolition Debris (C&D)	
Contaminated Soil	
Ferrous Metals From Transportation Equipment and C&D projects	
Food Processing Waste	
Glass From Transportation Equipment and C&D Projects	
Industrial Sludges	

<b>IB. MATERIALS EXCLUDED FROM MSW</b>	<b>ANNUAL AMOUNT DISPOSED OF (tons)</b>
Mining Waste	
Municipal Sludges	
Natural Disaster Debris	
Nonferrous Metals From Industrial or Construction Sources	
Oil and Gas Waste	
Plastics From Transportation Equipment	
Preconsumer Waste	
Used Oil	
Wood From C&D Activities	
<b>TOTAL EXCLUDED WASTES (tons)</b>	

**IC. Total MSW Disposed Of**

_____	+	_____	-	_____	=	_____
Total Waste Disposed Of (based on your most recent data)		Total Additional MSW (from 1A)		Total Excluded Wastes (from 1B)		<b>Total MSW Disposed Of (tons)</b>

## 2. Calculating Recycling

**2A.** Using the Scope of MSW Recycling table, determine if there are recycling activities that can be added to your current recycling rate. ***If you have current data for a recycling activity listed in the table,*** and it is not included in your current rate, specify the type and amount of material recycled below. Remember, add materials only if you already have current recycling data available.

<b>2A. RECYCLABLE MATERIAL</b>	<b>TOTAL (tons)</b>
<b>Commingled Materials</b>	
<b>Food Waste</b>	
<b>Glass Containers:</b>	
Clear	
Amber	
Green	
Mixed Glass	
Other Glass	
<i>Subtotal Glass</i>	
<b>Lead-Acid Batteries</b>	

2A. RECYCLABLE MATERIAL	TOTAL (tons)
<b>Metals:</b>	
Aluminum Cans	
Tin/Steel Cans	
Major Appliances	
Other Ferrous	
Other Nonferrous	
Mixed Metals	
<i>Subtotal Metals</i>	
<b>Paper:</b>	
Old Magazines	
Old Newspaper	
Old Corrugated Containers	
Office Papers	
Telephone Directories	
Mixed Paper	
Other Paper	
<i>Subtotal Paper</i>	
<b>Plastic:</b>	
PETE	
HDPE	
PVC	
LDPE	
PP	
PS	
Mixed Plastic	
Other Plastic	
<i>Subtotal Plastic</i>	
<b>Textiles</b>	
<b>Tires</b>	
<b>Wood:</b>	
Wood Packaging	
Other Wood	
<i>Subtotal Wood</i>	

<b>2A. RECYCLABLE MATERIAL</b>	<b>TOTAL (tons)</b>
<b>Yard Trimmings:</b>	
Brush and Branches	
Grass	
Leaves	
Tree Stumps	
Mixed Yard Trimmings	
<i>Subtotal Yard Trimmings</i>	
<b>Other Recyclables:</b>	
_____	
_____	
<i>Subtotal Other Recyclables</i>	
<b>TOTAL (tons)</b>	

**2B.** The waste management activities listed in the table below are excluded from the standard recycling rate. For each excluded activity included in your current recycling rate, fill in the annual amount of waste recovered in your state or locality according to that method. Use your most recent data. Refer to the Glossary and Scope of MSW Recycling table for further clarification of the terms used here.

<b>ACTIVITIES EXCLUDED FROM THE STANDARD RECYCLING RATE</b>	<b>AMOUNT RECOVERED (TONS)</b>
Alternative Daily Landfill Cover	
Backyard Composting of Yard Trimmings and Food Waste	
Combustion	
Grasscycling	
Mulching of Tree Stumps From C&D Debris	
Recycling of Materials Excluded From MSW (from 1B)	
Reuse (see Scope of MSW Recycling table)	
Source Reduction	
<b>TOTAL (tons)</b>	

**2C. Total MSW Recycled**

_____	+	_____	-	_____	=	_____
Total Waste Recycled (based on your most recent data)		Total Additional Recycling (from 2A)		Total Excluded Amount (from 2B)		<b>Total MSW Recycled (tons)</b>

### 3. Calculating a Standard Recycling Rate

#### 3A. MSW Recycling Rate (%)

$$\left[ \frac{\text{Total MSW Recycled (from 2C)}}{\text{Total MSW Recycled (from 2C)} + \text{Total MSW Disposed Of (from 1C)}} \right] \times 100 = \text{MSW Recycling Rate (\%)}$$