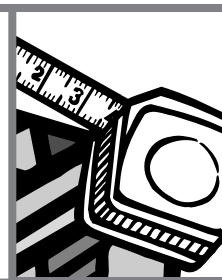


US EPA ARCHIVE DOCUMENT

# Converting Waste Reduction Results Into Cost Savings



Once your organization has successfully quantified the results of its waste reduction activities, an important step is to evaluate how your accomplishments affect your organization's bottom line. Waste reduction programs can result in impressive savings through reduced purchasing, operating, and storage costs. In addition, many organizations can achieve substantial cost savings by adjusting their waste removal contracts to reflect reduced volumes of waste. For example, as your organization generates less waste, you may be able to reduce the frequency of trash pickups.

The following information will help you analyze how your waste reduction program can translate into cost savings. To determine your actual cost savings, you need to have already estimated how much waste you are generating (*Calculating Amount Reduced*) and your current waste removal costs (*Estimating Waste Removal Costs*). Please note that these guides do not calculate net costs or savings. To do this, you would need to consider any capital or operating expenses incurred as a result of the program. The example tables are designed to help your organization quantify and total the three main factors influencing potential cost savings:

- Avoided waste removal costs
- Avoided purchasing costs
- Revenues

Please be aware that not all activities will yield large waste removal cost savings. Many activities such as reducing paper consumption or reusing office supplies and equipment show up more in avoided purchasing costs than in avoided waste removal costs. Additionally, revenues from recycling will vary considerably depending on many factors, including geographic location. Also keep in mind that costs are not the sole indicator of a program's success. Be sure to consider the intangible benefits of waste reduction, such as improved corporate image and employee morale, when gauging the success of your program.

In addition to the tools presented in the following pages, worksheets F and G located in EPA's *Business Guide for Reducing Solid Waste* (EPA530-K-92-004) may be particularly valuable.

# A Avoided Waste Removal Costs

The following tables illustrate how to use your estimated waste removal costs to help calculate the avoided waste removal costs associated with your organization's waste prevention activities. Avoided waste removal costs will be calculated differently, depending on how your organization is charged for waste removal. Organizations may be charged by weight, volume, container pull, or a combination of these. Use one or more of the tables below as appropriate for your organization's waste removal billing system. If your organization is charged in a combination of ways for waste removal services, and you fill out two or more of the tables below, combine the results from each table to calculate your total avoided waste removal costs.

## By Weight

Use the table below to estimate annual avoided waste removal costs for an organization charged by weight.

Activity	Total Annual Amount of Waste Reduced (in tons)	Waste Removal Cost (per ton)	Annual Avoided Removal Costs
	<b>X</b>	<b>=</b>	
Packaging Reductions	300	(e.g., \$40/ton)	\$12,000.00
Office Supply/ Equipment Reuse	0.93	(e.g., \$40/ton)	\$37.20
Paper Reductions	7.3	(e.g., \$40/ton)	\$292.00
<b>Total</b>			\$12,329.20

## By Volume

Use the table below to estimate annual avoided waste removal costs for an organization charged by volume.

Activity	Total Annual Amount of Waste Reduced (in cubic yards)	Waste Removal Cost (per cubic yard)	Annual Avoided Removal Costs
	<b>X</b>	<b>=</b>	
<b>Total</b>			

## By Container Pull

Use the table below to estimate the annual avoided waste removal costs for an organization charged by container pull.

Activity	Total Annual Amount of Waste Reduced (in cubic yards)	÷	Volume of Hauling Container	=	Container Pulls Avoided	×	Cost per Pull (in dollars)	=	Annual Avoided Removal Costs
<b>Total</b>									

## **B** Avoided Purchasing Costs

Use the following table to calculate the annual savings from avoided purchasing costs resulting from your waste reduction activities. The values in the table are based on the examples presented previously.

Activity	Material	Amount of Material Not Purchased (per Time Period)	×	Unit Price	=	Total Avoided Purchasing Cost*	×	Annual Multiplier =	Annual Avoided Purchasing Cost
Paper Reductions	White office paper	56.5 reams/wk	×	\$3.00 per ream	=	\$169.50 per week	×	52	\$8,814.00
Office Supply Reuse	Manila folders	50/wk	×	\$14 per 100 folders	=	\$7.00 per week	×	52	\$364.00
Office Supply Reuse	Hanging folders	35/wk	×	\$16 per 25 folders	=	\$22.40 per week	×	52	\$1,164.80
<b>Total</b>									\$10,342.80

\*From Office Products 1996 Catalogue

## C Revenues

Use the following table to calculate the revenues received from collected recyclables or exchanged materials.

Activity	Amount Collected per Time Period	Annual Amount Collected	Unit Price	Estimated Annual Revenue
		<b>X Annual Multiplier =</b>	<b>X</b>	<b>=</b>
Glass recycling	55 pounds per week	2,860 pounds per year	\$0.08 per pound	\$229
<b>Total</b>				

If your company receives additional revenues from other measures such as materials exchanges or the sale of compost, use the formula below to calculate total annual revenues from your waste reduction program.

\$229.00	+	\$0	=	\$ 229.00
Revenues from recycling		Revenues from materials exchanges, compost sales, etc.		<b>Total Annual Revenues</b>

## D Gross Annual Waste Reduction Savings

Use the following formula to calculate the gross annual savings resulting from your waste reduction program. If an estimate of your program's net savings is desired, estimate operating costs for each of your waste reduction measures. Then, subtract these costs from the gross savings calculated below.

\$10,342.80	+	\$229.00	+	\$12,329.20	=	\$ 22,901.00
Total annual avoided purchasing costs		Total annual revenues		Total annual avoided waste removal costs		<b>Total Annual Waste Reduction Savings</b>