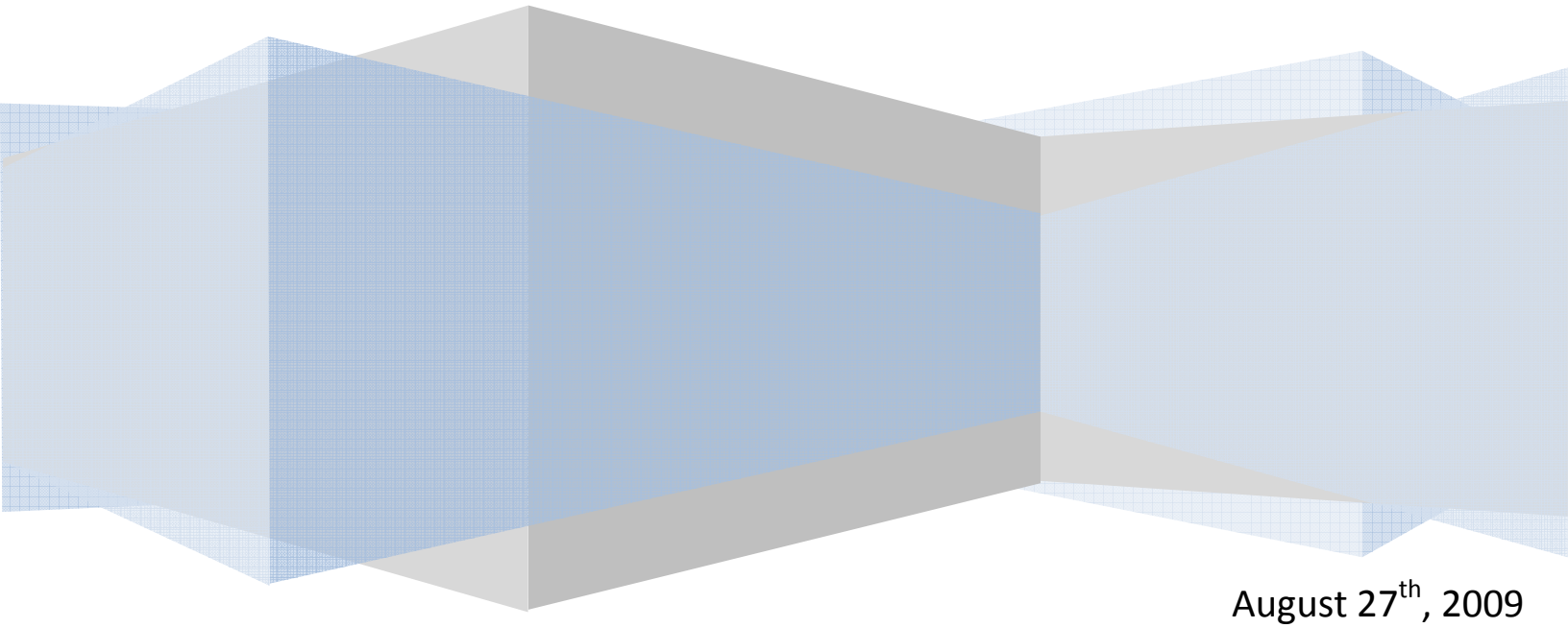
How to Conduct a Business Waste Audit

Workbook

Houston- Galveston Area Council (H-GAC)



August 27th, 2009

R·W·BECK

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Section 1: R. W. Beck Waste Audit Forms

H-GAC LEED EBOM
Business Waste Audit

INTERVIEW QUESTIONS:

1. Business Contact Information (Name, addresses, contact info)

Name_____

Address_____

Contact Name/Number_____

Fax: Email:

2. Indicate store type: _____
3. Number of employees: _____
4. Square footage: Number of Buildings/Function:
5. Acreage (green space):_____
6. Do you have a floor plan or building layout?_____
7. Do you currently have a recycling program? ☐ Yes ☐ No
8. Describe overall waste-generating activities that take place on site:_____

_____

_____

_____

_____

_____

9. How is **refuse** handled from its point of generation to the container from which it is ultimately collected by the collection company?

_____

_____

_____

_____

_____

_____

DATE_____ TIME_____

10. How are **recyclable materials** handled from their point of generation to the container from which they are ultimately collected by the collection company?

    _____

    _____

    _____

11. Who manages the recycling program?_____

12. Is space a limiting factor in siting additional recycling/waste storage containers?
    ☐ Yes ☐ No

If yes, describe: _____

_____

13. Could the work area configuration, containers, and/or aesthetics be improved to enhance the recycling program?

    _____

_____

14. Is waste generated at this facility known to be variable by day of week or season?

☐ Yes ☐ No If yes, describe: _____

_____

15. Please provide general comments/concerns about waste reduction and recycling at your site:_____

_____

Collection Information:

Container #1 - Size _____ CY Material _____ Collection Frequency_____

Container #2 - Size _____ CY Material _____ Collection Frequency_____

Container #3 - Size _____ CY Material _____ Collection Frequency_____

Container #4 - Size _____ CY Material _____ Collection Frequency_____

Billing Structure

Collection Cost

$ _____ (Weekly, Monthly, Annually, Per Pull, Per Cubic Yard, Per Ton)

Container Rental Fee

$_____ (Weekly, Monthly, Annually)

Worksheet A: Estimating Disposal Costs

Off-Site Waste Removal

A. Name of waste removal company _____

Telephone number _____ Date contract expires_____

B. Removal Schedule

Number of times _____ Per (day/week/month/other) _____
Days of week _____ Time(s) of day _____

Choose one of the following tables (C1, C2, or C3) to calculate your Total Waste Removal Cost:

C1. Waste removal charge- If charged as flat fee or part of rent

Type of Container (ex. 2 CY dumpster)	**(1)** Fee per Charge (week, month, year)	**(2)** Charges per Year	**(1) x (2) =** Total Annual Cost
		(3) Total Waste Removal Cost	

C2. Waste removal charge- If charged by weight (lbs) or volume (Cubic Yards = CY)

Type of Waste (ex. Recycling, Trash)	**(1)** Charge per lb/Ton or CY ($)	**(2)** # of lbs/Tons or CY per Year	**(1) x (2) =** Total Annual Cost
		(3) Total Waste Removal Cost	

C3. Waste removal charge- If charged per pull

Type of Container (ex. 2 CY dumpster)	**(1)** Charge per Pull ($)	**(2)** # of Pulls per Year	**(1) x (2) =** Total Annual Cost
		(3) Total Waste Removal Cost	

If you are charged a container rental fee, complete the following table to calculate your Total Annual Rental Cost. Once you find the Total Annual Rental Cost add that value to the Total Waste Removal Cost (calculated in one of the three previous tables) to find your Total Annual Disposal Cost.

Type of Container (ex. 2 CY dumpster)	**(1)** Fee (Month, Year)	**(2)** # of Charges per Year	**(1) x (2) =** Total Annual Rental Cost
		(4) Total Annual Rental Cost	

_____ + _____ = _____

Total Waste Removal Cost **(3)** | Total Annual Rental Cost **(4)** | Total Annual Disposal Costs **(5)**

WORKSHEET B: CONDUCTING A WASTE ANALYSIS

The following are two options for estimating the types and quantities of materials in a company's waste stream. This knowledge will aid you in targeting materials for recycling and reduction and in contacting recyclers.

Method I: by Volume

This Method involves visually monitoring the dumpster and keeping track of the following:

- What materials are visible in the dumpster?
- What materials take up the largest volume in the dumpster?
- How full is the dumpster?

Waste Analysis Estimation

Day observed _____ How full (%)_____

Materials Visible	Estimated Percentage of Waste Stream
_____Metals_____	_____
_____Mixed Paper_____	_____
_____Cardboard_____	_____
_____Glass_____	_____
_____Plastics_____	_____
_____Wet Waste_____	_____
_____Landscape Waste_____	_____

Container Size_____CY Annual CY Disposed_____

(1) Container Size (CY)	**(2)** # of Collections per month	**(1) x (2) = (3)** CY collected per month	**(3) x 12 months = (4)** Annual CY

Method 2: by Weight

This method provides a more accurate estimation of the quantity of material in the waste stream. Place a container near the dumpster or in a central location and designate it for your targeted material. Notify all employees that, for a specified period of time, all of the targeted material will be placed in this container rather than the dumpster. With certain materials, such as Cardboard boxes, it may be possible to have one employee or the cleaning staff segregate the material. For other materials, such as office paper, all employees will need to be involved. Note that the container must be under shelter.

At the end of the specified time period, record the quantity of material accumulated. Contact your local recyclers to find one that will pick up or allow you to drop-off the sorted material for recycling.

Waste Analysis Estimation

Material	**(1)** # Days of Sorted Waste	**(2)** Weight (lbs)	**(2) ÷ (1) = (3)** Daily Amount (lbs/day)*	**(4)** # operation days per year	**(3) x (4) = (5)** Annual Pounds
Metals					
Mixed Paper					
Cardboard					
Glass					
Plastics					
Wet Waste					
Landscape Waste					
				(6)Total Annual Pounds	

*Be sure to remove the weight of the container (tare weight)!

WORKSHEET C: CALCULATING AVOIDED COLLECTION/ DISPOSAL COSTS

Depending upon the amount of material diverted from the waste stream, a business may be able to save money by reducing the number of times per week the dumpster is hauled or by reducing the size of the dumpster. The following tables will aid you and your business to find an estimated percent of waste diverted for targeted recyclable materials. It is recommended for businesses to ask their waste hauler how much disposal costs can be reduced if the waste stream is reduced by the percent estimated in the following tables.

Method 1: by Volume

Use this formula if you used a visual estimate of the waste stream or if you calculated volumes in the waste sort.

Material	**(1)** Estimated % of Waste Stream (from Worksheet B)	**(2)** Annual Disposed CY (#4 on Worksheet B)	**(1) x (2) = (3)** Targeted CY from Diversion	**(3) x 70%** = (4)** Targeted Diversion (CY)	**[(4) ÷ (2)] x 100%** = Percent of Waste Stream Diverted
Metals					
Mixed Paper					
Cardboard					
Glass					
Plastics					
Wet Waste					
Landscape Waste					
				(5) Total % diverted	

**To be conservative, assume that 70% of targeted materials will be captured.

Method 2: by Weight

Use this formula if you calculated material weight in the waste sort.

Material	**(1)** Pounds of Material discarded per Year (#5 from Worksheet B)	**(2)** Annual Total Weight of Waste Disposed (#6 Worksheet B)	**(1) x 70%** = (3)** Targeted Diversion	**(3) ÷ (2) = (4)** Percent of Waste Stream Diverted
Metals				
Mixed Paper				
Cardboard				
Glass				
Plastics				
Wet Waste				
Landscape Waste				
			(5) Total % diverted	

**To be conservative, assume that 70% of targeted materials will be captured.

WORKSHEET D: EVALUATING THE COSTS OF A WASTE REDUCTION OR RECYCLING PROGRAM

Monthly Program Costs

Additional Collection Costs	$_____
Additional labor (cleaning/maintenance staff)	$_____
Additional energy requirements	$_____
Transportation	$_____
Additional space requirements	$_____
Education/promotion	$_____
Record keeping	$_____
Total Monthly Program Costs	**(1) $**_____

START-UP COSTS (AMORTIZED MONTHLY)

Containers	$_____
Equipment (if any)	$_____
Other:	$_____
Total Start-up Program Costs	**(2) $**_____

Monthly Program Savings and Revenues

Estimated avoided collection/disposal costs: **Total** % of Waste Diverted (#5 in Worksheet C) x **Costs** (#3 in Worksheet A) ÷ 12	$_____
Decrease in new material costs	$_____
Revenues from sale of recyclables	$_____
Avoided purchases	$_____
Avoided labor (cleaning/maintenance staff)	$_____
Total Program Savings/Revenues	**(3) $**_____

Total Program Savings/Revenues (3) – Total Program Costs (1+2) **$**_____

Section 2: Example Waste Audit by Volume

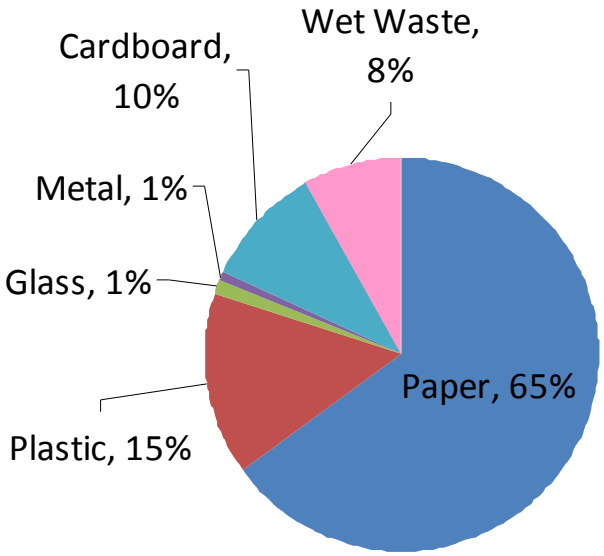
The Paper Company is a medium sized office with 50 employees located at 123 Main Street in Florida. They have a small existing recycling program that they want to expand and are curious about their company's diversion rates. To find out if a full-force recycling program is worth their time, energy, and money, The Paper Company has decided to conduct a Waste Audit. Currently, the office only recycles aluminum cans (such a shame considering they sell office paper!!), in which two recycling bins are provided in the break room for access to all employees. An employee takes the cans home once a week to recycle in his home curb-side program. Essentially, the Company is spending no money on their current recycling plan.

Their waste comes from rooms all over the office building that include 50 offices, 1 break room, 4 conference rooms, 2 bathrooms (a men's and women's), 1 copy room, and general trashcans placed throughout the building (next to the printers, in the hallways, etc.). Waste is collected at the end of the day by a cleaning staff and brought to an 8 CY dumpster for "Refuse" only, and is collected five times a week. The office pays $1,000 per month for collection of the dumpster.

With this information, can you help them perform a waste audit with the **volume** method?

Volume Visual

Volumetric Percentage Composition



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Business Waste Audit

INTERVIEW QUESTIONS:

1. Business Contact Information (Name, addresses, contact info)

Name The Paper Company

Address 123 Main Street

Contact Name/Number _____

Fax: Email:

2. Indicate store type: office

3. Number of employees: _____

4. Square footage: Number of Buildings/Function:

5. Acreage (green space): _____

6. Do you have a floor plan or building layout? yes

7. Do you currently have a recycling program? ☐ Yes ☐ No

8. Describe overall waste-generating activities that take place on site: _____

9. How is **refuse** handled from its point of generation to the container from which it is ultimately collected by the collection company?

DATE _____ TIME _____

10. How are **recyclable materials** handled from their point of generation to the container from which they are ultimately collected by the collection company?

11. Who manages the recycling program?_____

12. Is space a limiting factor in siting additional recycling/waste storage containers?
☐ Yes ☒ No

If yes, describe: _____

13. Could the work area configuration, containers, and/or aesthetics be improved to enhance the recycling program?

14. Is waste generated at this facility known to be variable by day of week or season?

☐ Yes ☒ No If yes, describe: _____

15. Please provide general comments/concerns about waste reduction and recycling at your site:_____

Collection Information:

Container #1 - Size 8 CY Material Refuse Collection Frequency 5x/week

Container #2 - Size _____ CY Material _____ Collection Frequency_____

Container #3 - Size _____ CY Material _____ Collection Frequency_____

Container #4 - Size _____ CY Material _____ Collection Frequency_____

Billing Structure

Collection Cost

$ _____ (Weekly, Monthly, Annually, Per Pull, Per Cubic Yard, Per Ton)

Container Rental Fee

$_____ (Weekly, Monthly, Annually)

Worksheet A: Estimating Disposal Costs

Off-Site Waste Removal

A. Name of waste removal company _____

Telephone number _____ Date contract expires_____

B. Removal Schedule

Number of times _____ Per (day/week/month/other) _____
Days of week _____ Time(s) of day _____

Choose one of the following tables (C1, C2, or C3) to calculate your Total Waste Removal Cost:

C1. Waste removal charge- If charged as flat fee or part of rent

Type of Container (ex. 2 CY dumpster)	**(1)** Fee per Charge (week, month, year)	**(2)** Charges per Year	**(1) x (2) =** Total Annual Cost
		(3) Total Waste Removal Cost	

C2. Waste removal charge- If charged by weight (lbs) or volume (Cubic Yards = CY)

Type of Waste (ex. Recycling, Trash)	**(1)** Charge per lb/Ton or CY ($)	**(2)** # of lbs/Tons or CY per Year	**(1) x (2) =** Total Annual Cost
		(3) Total Waste Removal Cost	

C3. Waste removal charge- If charged per pull

Type of Container (ex. 2 CY dumpster)	**(1)** Charge per Pull ($)	**(2)** # of Pulls per Year	**(1) x (2) =** Total Annual Cost
		(3) Total Waste Removal Cost	

If you are charged a container rental fee, complete the following table to calculate your Total Annual Rental Cost. Once you find the Total Annual Rental Cost add that value to the Total Waste Removal Cost (calculated in one of the three previous tables) to find your Total Annual Disposal Cost.

Type of Container (ex. 2 CY dumpster)	**(1)** Fee (Month, Year)	**(2)** # of Charges per Year	**(1) x (2) =** Total Annual Rental Cost
		(4) Total Annual Rental Cost	

_____ + _____ = _____

Total Waste Removal Cost **(3)** | Total Annual Rental Cost **(4)** | Total Annual Disposal Costs **(5)**

WORKSHEET B: CONDUCTING A WASTE ANALYSIS

The following are two options for estimating the types and quantities of materials in a company's waste stream. This knowledge will aid you in targeting materials for recycling and reduction and in contacting recyclers.

Method I: by Volume

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- What materials are visible in the dumpster?
- What materials take up the largest volume in the dumpster?
- How full is the dumpster?

Waste Analysis Estimation

Day observed _____ How full (%)_____

Materials Visible	Estimated Percentage of Waste Stream
_____Metals_____	_____
_____Mixed Paper_____	_____
_____Cardboard_____	_____
_____Glass_____	_____
_____Plastics_____	_____
_____Wet Waste_____	_____
_____Landscape Waste_____	_____

Container Size_____CY Annual CY Disposed_____

(1) Container Size (CY)	**(2)** # of Collections per month	**(1) x (2) = (3)** CY collected per month	**(3) x 12 months = (4)** Annual CY

Method 2: by Weight

This method provides a more accurate estimation of the quantity of material in the waste stream. Place a container near the dumpster or in a central location and designate it for your targeted material. Notify all employees that, for a specified period of time, all of the targeted material will be placed in this container rather than the dumpster. With certain materials, such as Cardboard boxes, it may be possible to have one employee or the cleaning staff segregate the material. For other materials, such as office paper, all employees will need to be involved. Note that the container must be under shelter.

At the end of the specified time period, record the quantity of material accumulated. Contact your local recyclers to find one that will pick up or allow you to drop-off the sorted material for recycling.

Waste Analysis Estimation

Material	**(1)** # Days of Sorted Waste	**(2)** Weight (lbs)	**(2) ÷ (1) = (3)** Daily Amount (lbs/day)*	**(4)** # operation days per year	**(3) x (4) = (5)** Annual Pounds
Metals					
Mixed Paper					
Cardboard					
Glass					
Plastics					
Wet Waste					
Landscape Waste					
				(6)Total Annual Pounds	

*Be sure to remove the weight of the container (tare weight)!

WORKSHEET C: CALCULATING AVOIDED COLLECTION/ DISPOSAL COSTS

Depending upon the amount of material diverted from the waste stream, a business may be able to save money by reducing the number of times per week the dumpster is hauled or by reducing the size of the dumpster. The following tables will aid you and your business to find an estimated percent of waste diverted for targeted recyclable materials. It is recommended for businesses to ask their waste hauler how much disposal costs can be reduced if the waste stream is reduced by the percent estimated in the following tables.

Method 1: by Volume

Use this formula if you used a visual estimate of the waste stream or if you calculated volumes in the waste sort.

Material	**(1)** Estimated % of Waste Stream (from Worksheet B)	**(2)** Annual Disposed CY (#4 on Worksheet B)	**(1) x (2) = (3)** Targeted CY from Diversion	**(3) x 70%** = (4)** Targeted Diversion (CY)	**[(4) ÷ (2)] x 100%** = Percent of Waste Stream Diverted
Metals					
Mixed Paper					
Cardboard					
Glass					
Plastics					
Wet Waste					
Landscape Waste					
				(5) Total % diverted	

**To be conservative, assume that 70% of targeted materials will be captured.

Method 2: by Weight

Use this formula if you calculated material weight in the waste sort.

Material	**(1)** Pounds of Material discarded per Year (#5 from Worksheet B)	**(2)** Annual Total Weight of Waste Disposed (#6 Worksheet B)	**(1) x 70%** = (3)** Targeted Diversion	**(3) ÷ (2) = (4)** Percent of Waste Stream Diverted
Metals				
Mixed Paper				
Cardboard				
Glass				
Plastics				
Wet Waste				
Landscape Waste				
			(5) Total % diverted	

**To be conservative, assume that 70% of targeted materials will be captured.

WORKSHEET D: EVALUATING THE COSTS OF A WASTE REDUCTION OR RECYCLING PROGRAM

Monthly Program Costs

Additional Collection Costs	$_____
Additional labor (cleaning/maintenance staff)	$_____
Additional energy requirements	$_____
Transportation	$_____
Additional space requirements	$_____
Education/promotion	$_____
Record keeping	$_____
Total Monthly Program Costs	**(1) $**_____

START-UP COSTS (AMORTIZED MONTHLY)

Containers	$_____
Equipment (if any)	$_____
Other:	$_____
Total Start-up Program Costs	**(2) $**_____

Monthly Program Savings and Revenues

Estimated avoided collection/disposal costs: **Total** % of Waste Diverted (#5 in Worksheet C) x **Costs** (#3 in Worksheet A) ÷ 12	$_____
Decrease in new material costs	$_____
Revenues from sale of recyclables	$_____
Avoided purchases	$_____
Avoided labor (cleaning/maintenance staff)	$_____
Total Program Savings/Revenues	**(3) $**_____

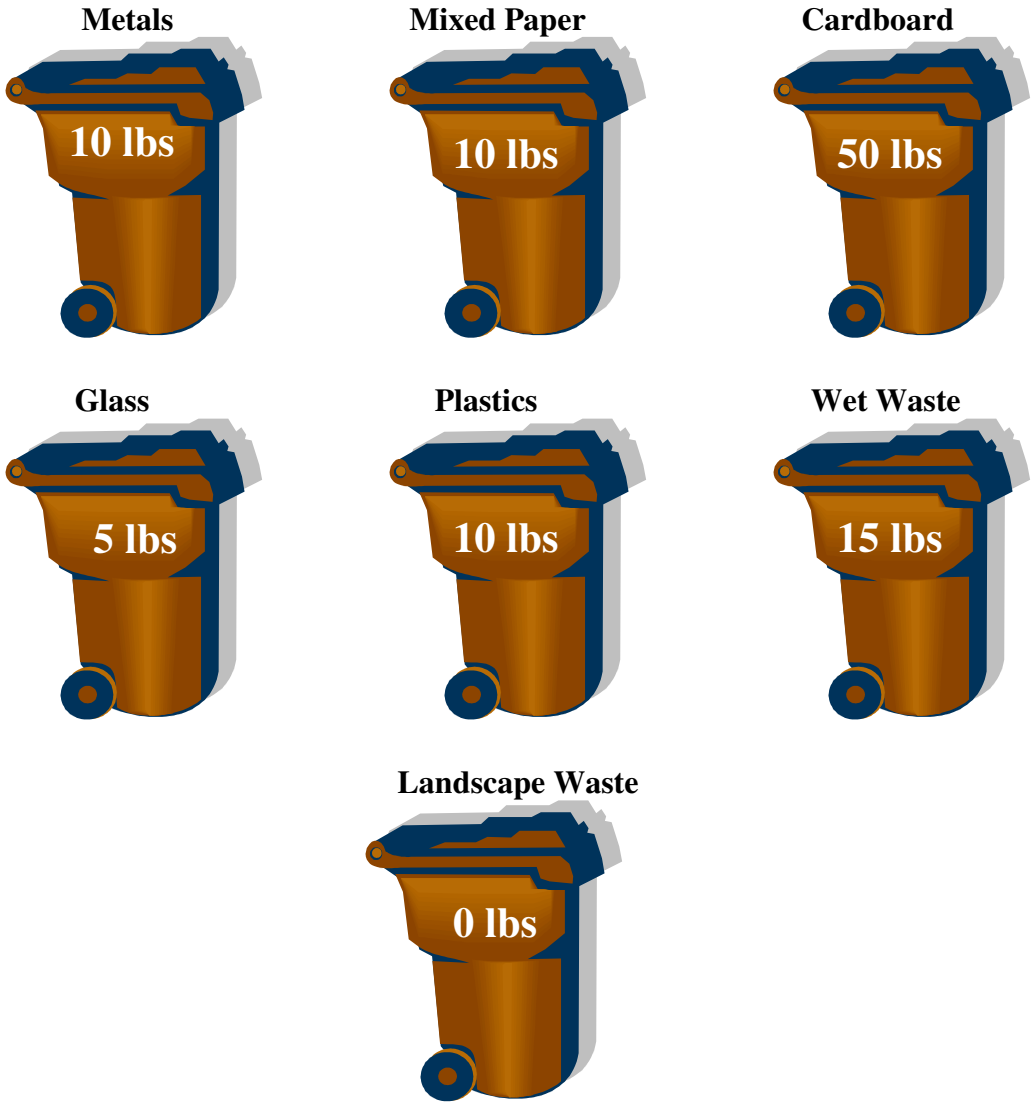
Total Program Savings/Revenues (3) – Total Program Costs (1+2) **$**_____

Section 3: Example Waste Audit by Weight

A second company, Surplus Direct, Inc., has decided to conduct a Waste Audit as well. Surplus is going to find their Total Waste Diversion factors by Weight (NOT Volume!). Surplus Direct does not currently have a recycling program, but does possess a very motivated staff under new management that is willing to start becoming "more green."

Surplus Direct's trash is collected daily by a cleaning service and is thrown into a 10 CY dumpster. The dumpster is collected five times a week for a cost of $1,000 per month.

Surplus Direct discards a lot of corrugated cardboard that they would like to start recycling. Although they found the weight of all the materials in their waste, they would like to know the most about the corrugated cardboard (OCC). What is an estimated Total Annual Pounds (Worksheet B) of OCC? What percent of the Waste Stream is Diverted (Worksheet C) for OCC?



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Business Waste Audit

INTERVIEW QUESTIONS:

1. Business Contact Information (Name, addresses, contact info)

Name Surplus Direct, Inc.

Address _____

Contact Name/Number office

Fax: Email:

2. Indicate store type: _____

3. Number of employees: _____

4. Square footage: Number of Buildings/Function:

5. Acreage (green space): _____

6. Do you have a floor plan or building layout? _____

7. Do you currently have a recycling program? ☐ Yes ☒ No

8. Describe overall waste-generating activities that take place on site: _____

9. How is **refuse** handled from its point of generation to the container from which it is ultimately collected by the collection company?

DATE _____ TIME _____

10. How are **recyclable materials** handled from their point of generation to the container from which they are ultimately collected by the collection company?

_____

_____

_____

11. Who manages the recycling program?_____

12. Is space a limiting factor in siting additional recycling/waste storage containers?
☐ Yes ☒ No

If yes, describe: _____

_____

13. Could the work area configuration, containers, and/or aesthetics be improved to enhance the recycling program?

_____

_____

14. Is waste generated at this facility known to be variable by day of week or season?

☐ Yes ☒ No If yes, describe: _____

_____

15. Please provide general comments/concerns about waste reduction and recycling at your site:_____

_____

Collection Information:

Container #1 - Size 10 CY Material Refuse Collection Frequency 5x/week

Container #2 - Size _____ CY Material _____ Collection Frequency_____

Container #3 - Size _____ CY Material _____ Collection Frequency_____

Container #4 - Size _____ CY Material _____ Collection Frequency_____

Billing Structure

Collection Cost

$ 1,000 (Weekly, (Monthly), Annually, Per Pull, Per Cubic Yard, Per Ton)

Container Rental Fee

$_____ (Weekly, Monthly, Annually)

Worksheet A: Estimating Disposal Costs

Off-Site Waste Removal

A. Name of waste removal company _____

Telephone number _____ Date contract expires_____

B. Removal Schedule

Number of times _____ Per (day/week/month/other) _____
Days of week _____ Time(s) of day _____

Choose one of the following tables (C1, C2, or C3) to calculate your Total Waste Removal Cost:

C1. Waste removal charge- If charged as flat fee or part of rent

Type of Container (ex. 2 CY dumpster)	**(1)** Fee per Charge (week, month, year)	**(2)** Charges per Year	**(1) x (2) =** Total Annual Cost
		(3) Total Waste Removal Cost	

C2. Waste removal charge- If charged by weight (lbs) or volume (Cubic Yards = CY)

Type of Waste (ex. Recycling, Trash)	**(1)** Charge per lb/Ton or CY ($)	**(2)** # of lbs/Tons or CY per Year	**(1) x (2) =** Total Annual Cost
		(3) Total Waste Removal Cost	

C3. Waste removal charge- If charged per pull

Type of Container (ex. 2 CY dumpster)	**(1)** Charge per Pull ($)	**(2)** # of Pulls per Year	**(1) x (2) =** Total Annual Cost
		(3) Total Waste Removal Cost	

If you are charged a container rental fee, complete the following table to calculate your Total Annual Rental Cost. Once you find the Total Annual Rental Cost add that value to the Total Waste Removal Cost (calculated in one of the three previous tables) to find your Total Annual Disposal Cost.

Type of Container (ex. 2 CY dumpster)	**(1)** Fee (Month, Year)	**(2)** # of Charges per Year	**(1) x (2) =** Total Annual Rental Cost
		(4) Total Annual Rental Cost	

_____ + _____ = _____

Total Waste Removal Cost **(3)** | Total Annual Rental Cost **(4)** | Total Annual Disposal Costs **(5)**

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Waste Analysis Estimation

Day observed _____ How full (%)_____

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_____Mixed Paper_____	_____
_____Cardboard_____	_____
_____Glass_____	_____
_____Plastics_____	_____
_____Wet Waste_____	_____
_____Landscape Waste_____	_____

Container Size_____CY Annual CY Disposed_____

(1) Container Size (CY)	**(2)** # of Collections per month	**(1) x (2) = (3)** CY collected per month	**(3) x 12 months = (4)** Annual CY

Method 2: by Weight

This method provides a more accurate estimation of the quantity of material in the waste stream. Place a container near the dumpster or in a central location and designate it for your targeted material. Notify all employees that, for a specified period of time, all of the targeted material will be placed in this container rather than the dumpster. With certain materials, such as Cardboard boxes, it may be possible to have one employee or the cleaning staff segregate the material. For other materials, such as office paper, all employees will need to be involved. Note that the container must be under shelter.

At the end of the specified time period, record the quantity of material accumulated. Contact your local recyclers to find one that will pick up or allow you to drop-off the sorted material for recycling.

Waste Analysis Estimation

Material	**(1)** # Days of Sorted Waste	**(2)** Weight (lbs)	**(2) ÷ (1) = (3)** Daily Amount (lbs/day)*	**(4)** # operation days per year	**(3) x (4) = (5)** Annual Pounds
Metals					
Mixed Paper					
Cardboard					
Glass					
Plastics					
Wet Waste					
Landscape Waste					
				(6)Total Annual Pounds	

*Be sure to remove the weight of the container (tare weight)!

WORKSHEET C: CALCULATING AVOIDED COLLECTION/ DISPOSAL COSTS

Depending upon the amount of material diverted from the waste stream, a business may be able to save money by reducing the number of times per week the dumpster is hauled or by reducing the size of the dumpster. The following tables will aid you and your business to find an estimated percent of waste diverted for targeted recyclable materials. It is recommended for businesses to ask their waste hauler how much disposal costs can be reduced if the waste stream is reduced by the percent estimated in the following tables.

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Metals					
Mixed Paper					
Cardboard					
Glass					
Plastics					
Wet Waste					
Landscape Waste					
				(5) Total % diverted	

**To be conservative, assume that 70% of targeted materials will be captured.

Method 2: by Weight

Use this formula if you calculated material weight in the waste sort.

Material	**(1)** Pounds of Material discarded per Year (#5 from Worksheet B)	**(2)** Annual Total Weight of Waste Disposed (#6 Worksheet B)	**(1) x 70%** = (3)** Targeted Diversion	**(3) ÷ (2) = (4)** Percent of Waste Stream Diverted
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Glass				
Plastics				
Wet Waste				
Landscape Waste				
			(5) Total % diverted	

**To be conservative, assume that 70% of targeted materials will be captured.

WORKSHEET D: EVALUATING THE COSTS OF A WASTE REDUCTION OR RECYCLING PROGRAM

Monthly Program Costs

Additional Collection Costs	$_____
Additional labor (cleaning/maintenance staff)	$_____
Additional energy requirements	$_____
Transportation	$_____
Additional space requirements	$_____
Education/promotion	$_____
Record keeping	$_____
Total Monthly Program Costs	**(1) $**_____

START-UP COSTS (AMORTIZED MONTHLY)

Containers	$_____
Equipment (if any)	$_____
Other:	$_____
Total Start-up Program Costs	**(2) $**_____

Monthly Program Savings and Revenues

Estimated avoided collection/disposal costs: **Total** % of Waste Diverted (#5 in Worksheet C) x **Costs** (#3 in Worksheet A) ÷ 12	$_____
Decrease in new material costs	$_____
Revenues from sale of recyclables	$_____
Avoided purchases	$_____
Avoided labor (cleaning/maintenance staff)	$_____
Total Program Savings/Revenues	**(3) $**_____

Total Program Savings/Revenues (3) – Total Program Costs (1+2) **$**_____

Section 4: LEED EBOM Sample Form

(Responsible Individual) (Company Name)

I, _____, from _____

oversee and am responsible for the operational elements addressed in the requirements of this credit. I verify that the information provided below is accurate and that the project meets the requirements of the credit, to the best of my knowledge.

Credit Compliance

The performance period for this credit began on _____ and ended on _____

NOTE: The performance period must last between 3 months and 2 years.

☐ The project team has performed an audit of the entire ongoing consumables waste stream of the building and grounds during the performance period. The audited waste stream includes both landfill/incineration-directed waste and waste diverted via reuse, recycling, etc.

To support this declaration:

☐ The project team has uploaded a summary of the waste stream audit report that includes a description of the audit procedure, a description of the sample of waste audited and the timing of the audit, and a rationale demonstrating that the audited sample is representative of the building's typical waste stream. The summary also explains whether the audited waste is measured by weight or volume [*required upload*].

NARRATIVE (required)*:

Please provide a narrative describing the opportunities identified for improved waste diversion practices based on the audit results.

Table 1.1 Building Baseline Waste Stream Audit

Enter data from the project building's Waste Stream Audit in the table below.

Please specify the unit type

NOTE: units of measurement must be consistent throughout all entries in the table below.

Waste Type	Weight or Volume in Waste Stream	Percentage of Total Waste Stream	Weight or Volume of Waste Type Diverted	Percentage of Waste Type Diverted from Waste Stream
Metals		0.00%		0.00%
Mixed Paper		0.00%		0.00%
Cardboard		0.00%		0.00%
Glass		0.00%		0.00%
Plastics		0.00%		0.00%
Wet Waste		0.00%		0.00%
Landscape Waste		0.00%		0.00%
Total:	0	0.00%	0	0.00%

The scope of the waste data provided includes:

☐ Waste generated throughout the entire project building and for the associated grounds.
(Note – if this is box is checked, a narrative must be provided below)

NARRATIVE (required if data above pertains to the entire project building and grounds)*:

Provide a brief narrative explaining why the data includes the entire building and grounds (e.g., a single waste and/or recycling hauler serves the entire project, tenants supplied data for any portions with waste managed separately, etc.)

☐ Waste generated for all the grounds plus only portions of the project building, which represent at least 90% of the entire building's gross floor area *(NOTE: if this is box is checked, a narrative must be provided below).*

NARRATIVE (required if data above pertains to only portions of the project building)*:

Please provide a brief narrative summarizing the portions of the building for which the project team excluded the waste data and the reasons for the exclusion (e.g., because waste services are managed separately by tenants who would not supply data). For portions of the building for which waste data was included, explain why the data includes those portions and the grounds (e.g., a single waste and/or recycling hauler serves those portions, tenants supplied data for any portions with waste managed separately, etc.)

Optional Narrative*

OPTIONAL: Provide any additional comments or notes regarding special circumstances or consideration regarding the project's approach to this credit.

☐ The project is seeking to meet the requirements of this credit using an alternate compliance approach. The compliance approach, including references to any applicable Credit Interpretation Rulings, is fully documented in the narrative above.

LEED for Existing Buildings: Operations & Maintenance
Certification Submittal Template
MR Credit 6: Solid Waste Management: Waste Stream Audit

Project Name:

MR Credit 6: Solid Waste Management: Waste Stream Audit Points Documented

* All narratives must comply with Minimum Narrative Requirements (see footnote below.) If a narrative is submitted as a separate document, enter "see uploaded documentation" in that field.
** Documents referenced in this template, including guidance on Declarants (i.e., the signer of this template), Minimum Narrative Requirements, and Licensed Professional Exemptions, can be found on the LEED-EB:O&M Registered Project Tools page at www.usgbc.org